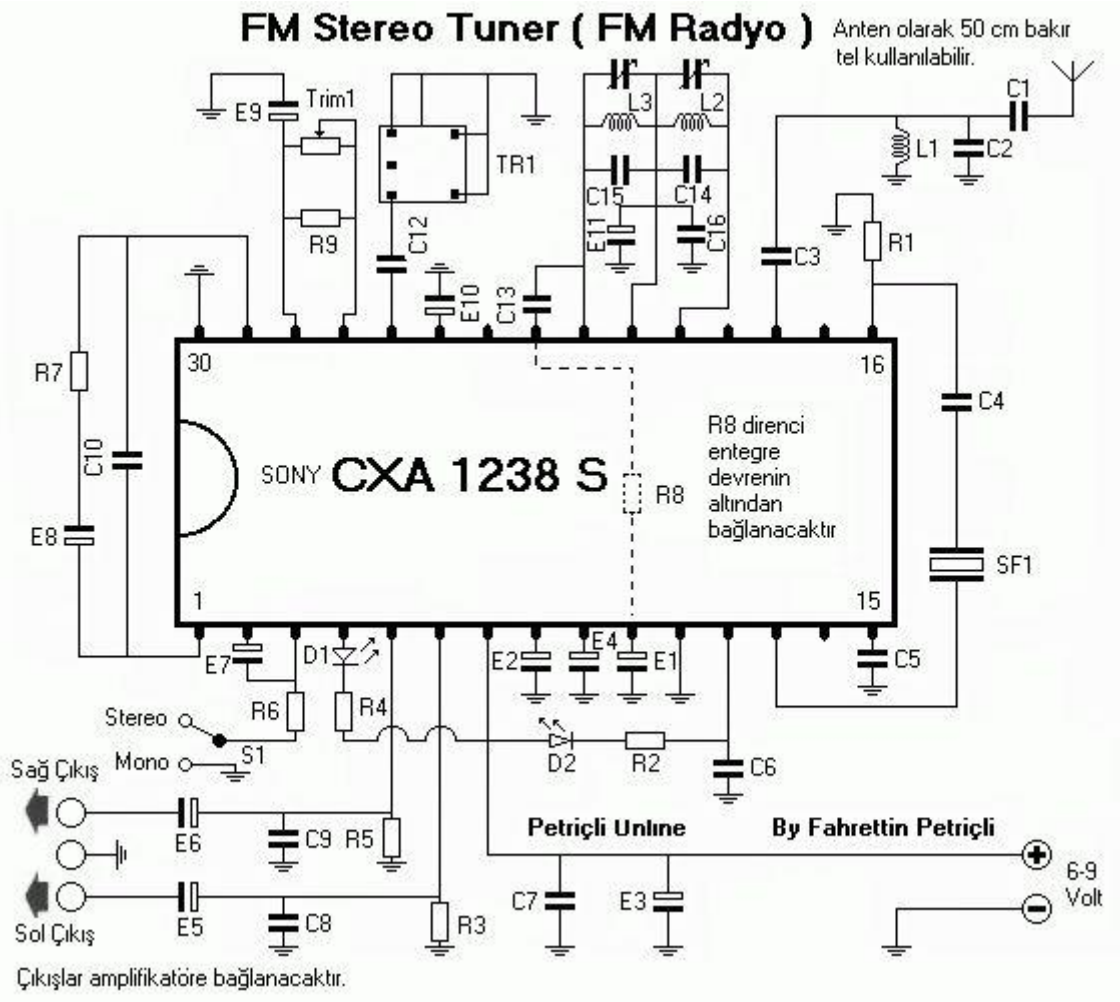
ELEKTRONİK HOBİ DEVRELERİ 1

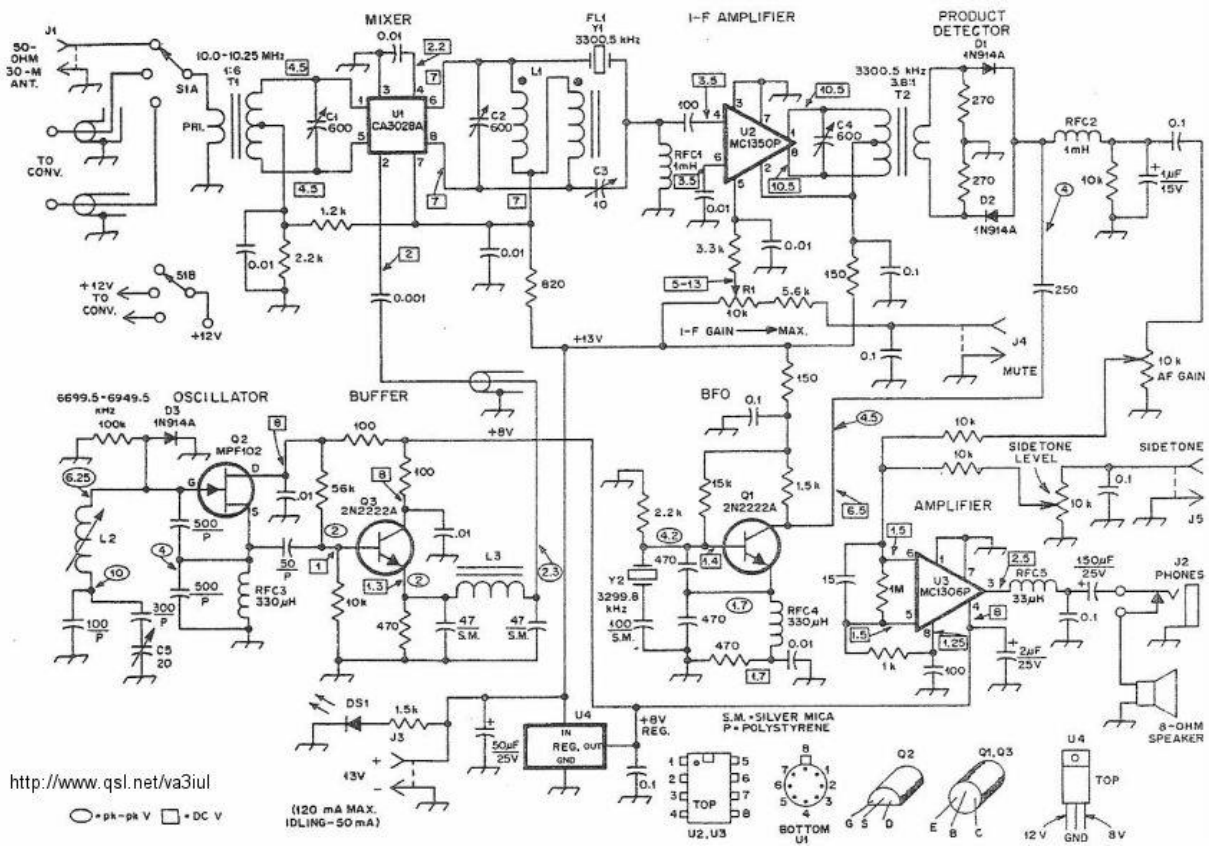
ALICILAR VE VERİCİLER



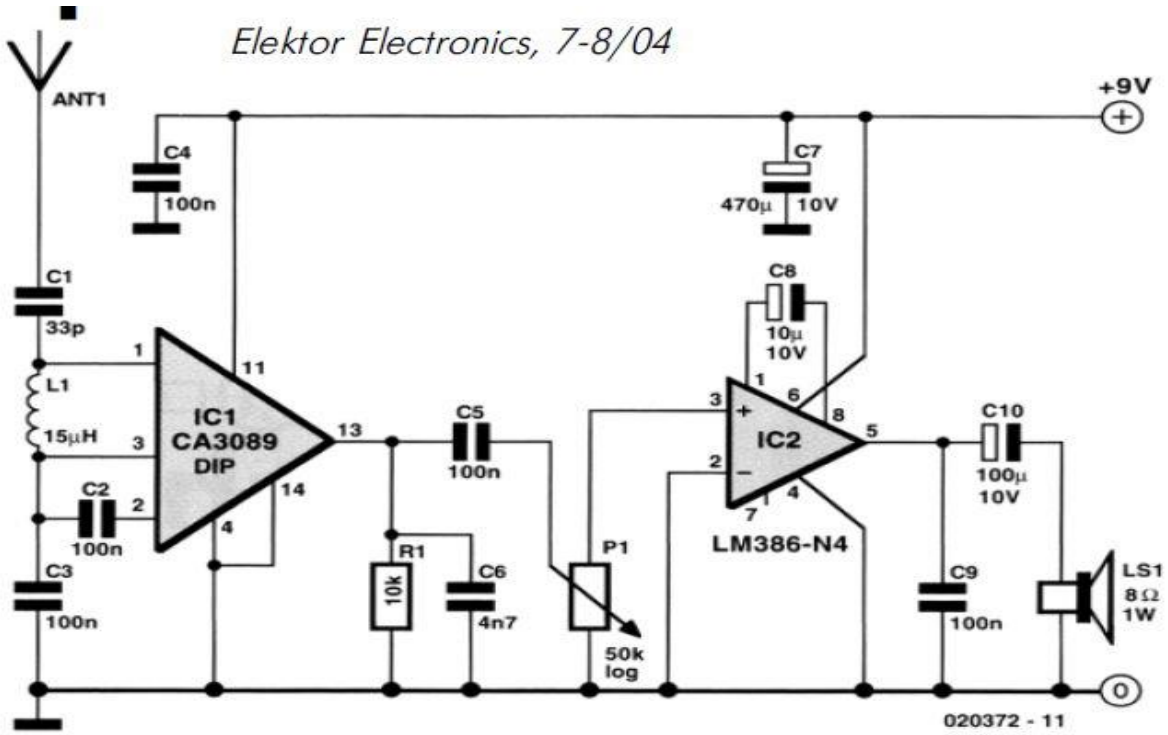
FAHRETTİN PETRİÇLİ

ALICILAR

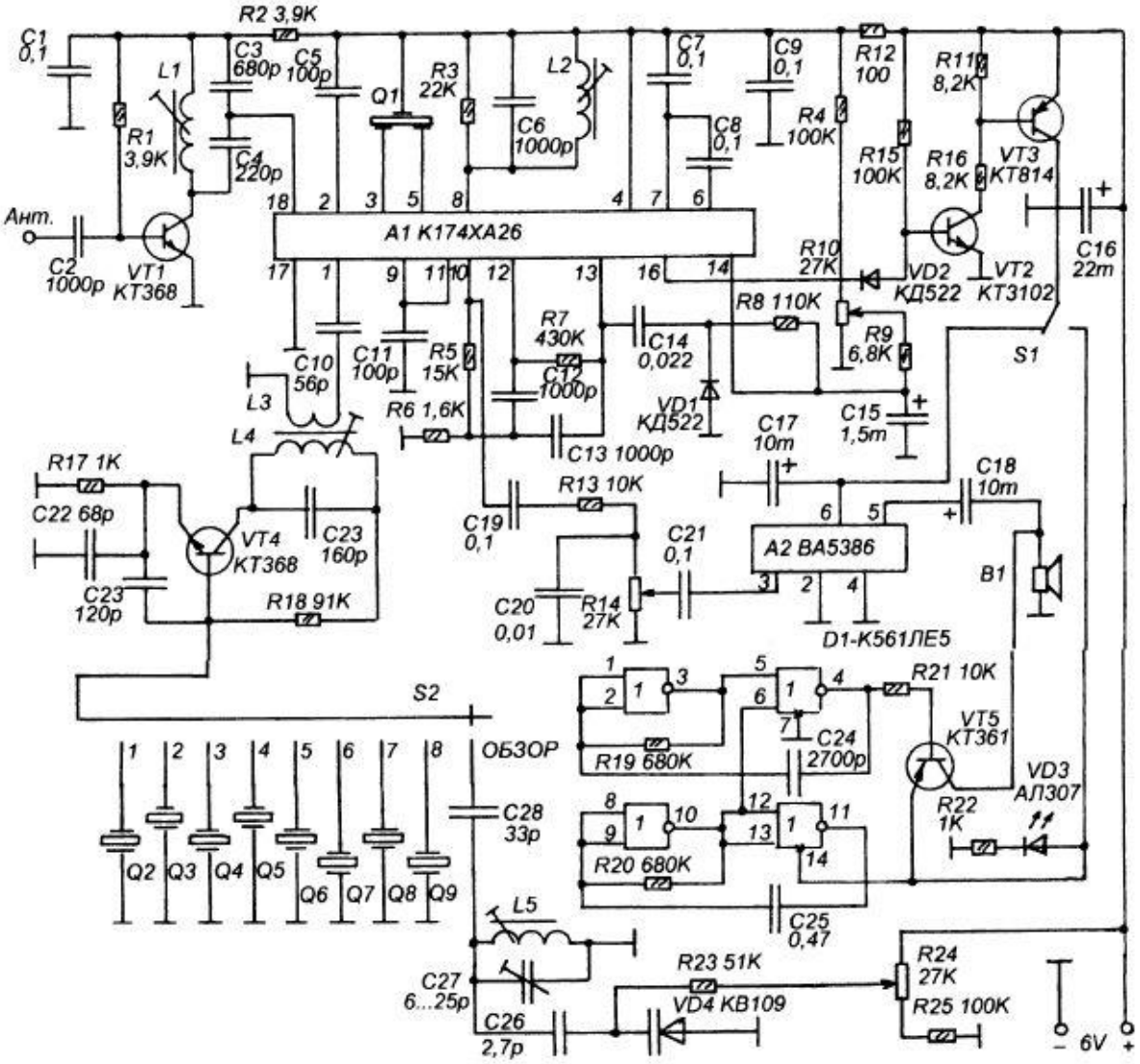
1-10 Mhz SSB Alıcı



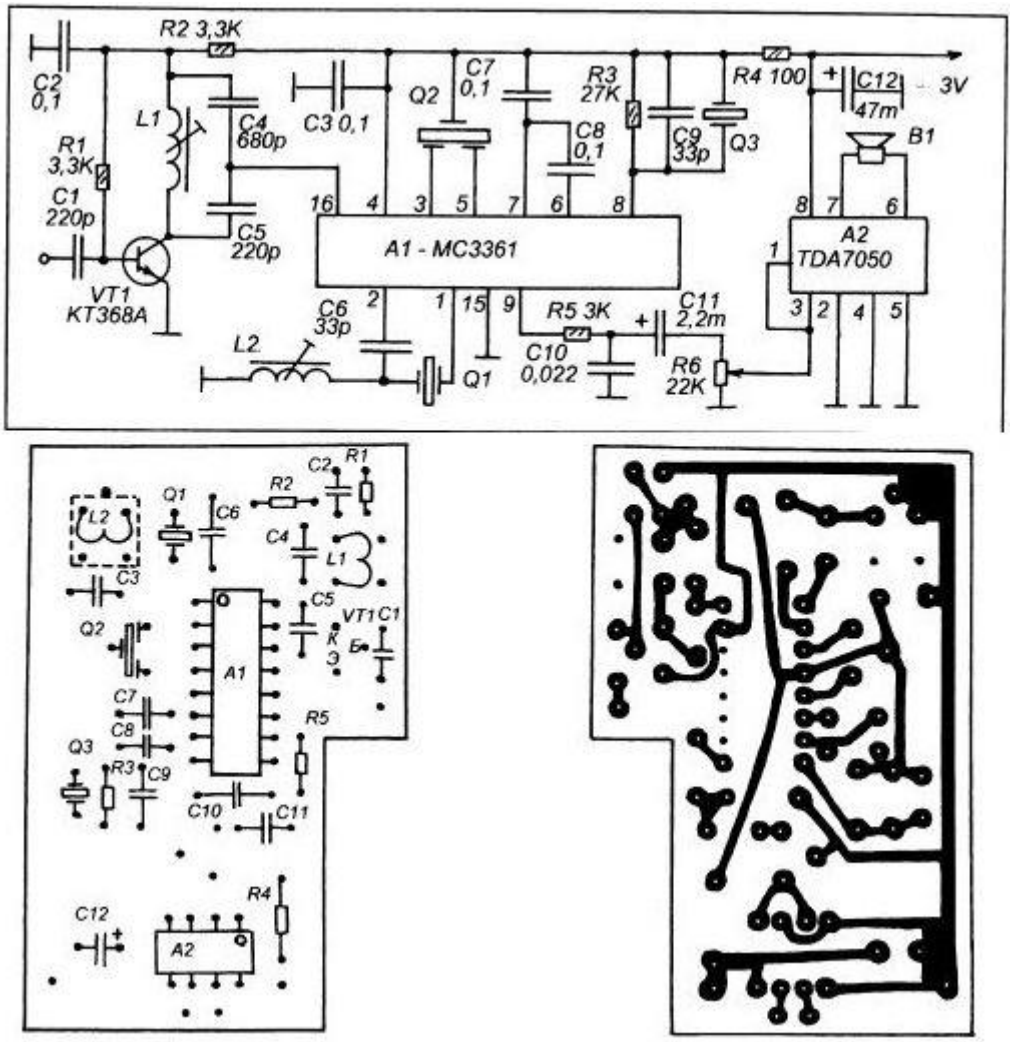
AM Kısa Dalga Alıcı



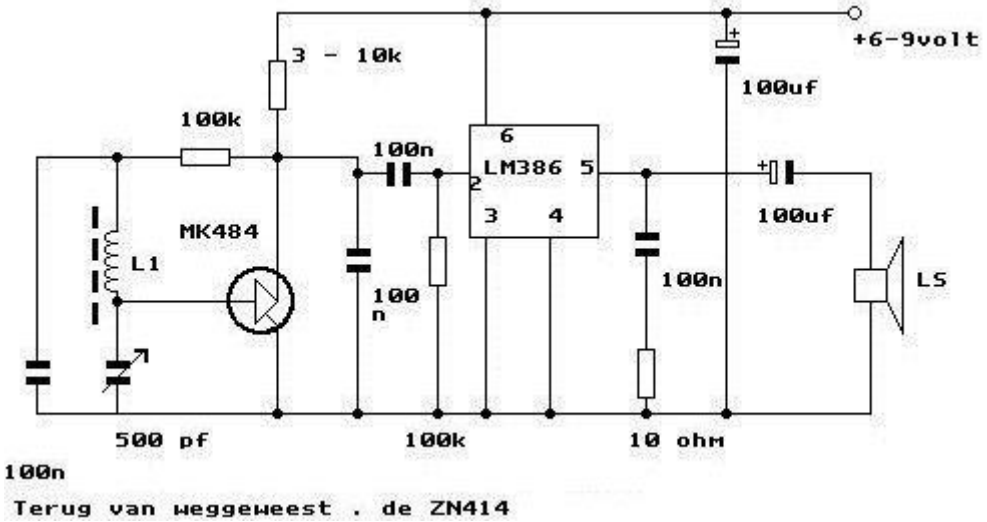
AM CB Alıcı 1-27 Mhz (8 Kanal)



AM CB Alıcı 1-27 Mhz



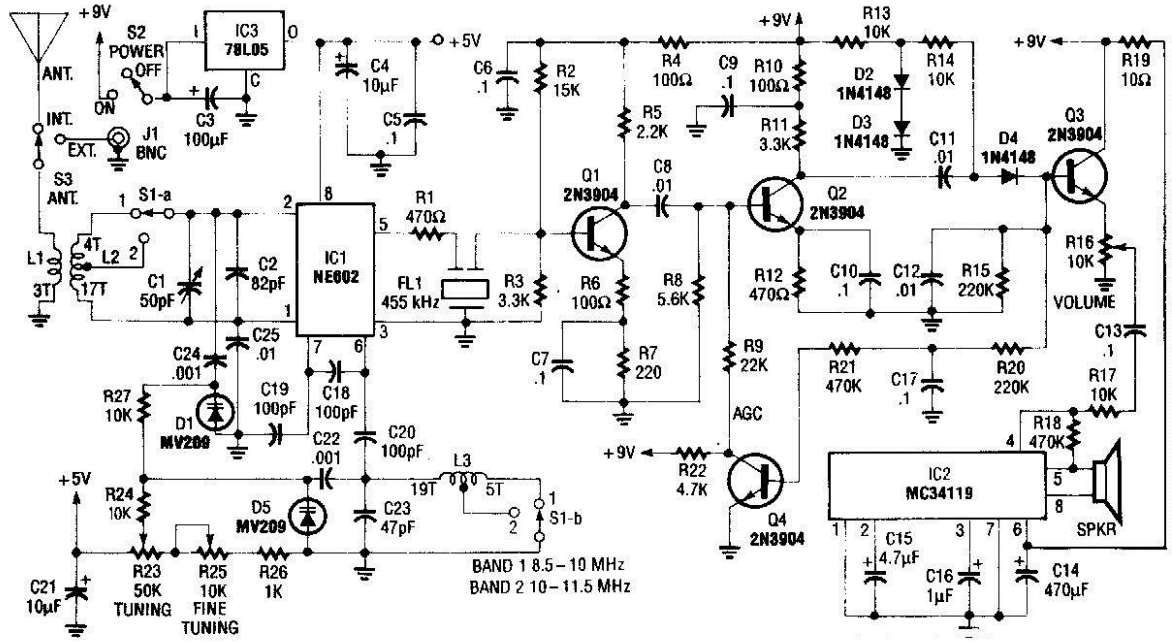
AM Kısa Dalga Alıcı



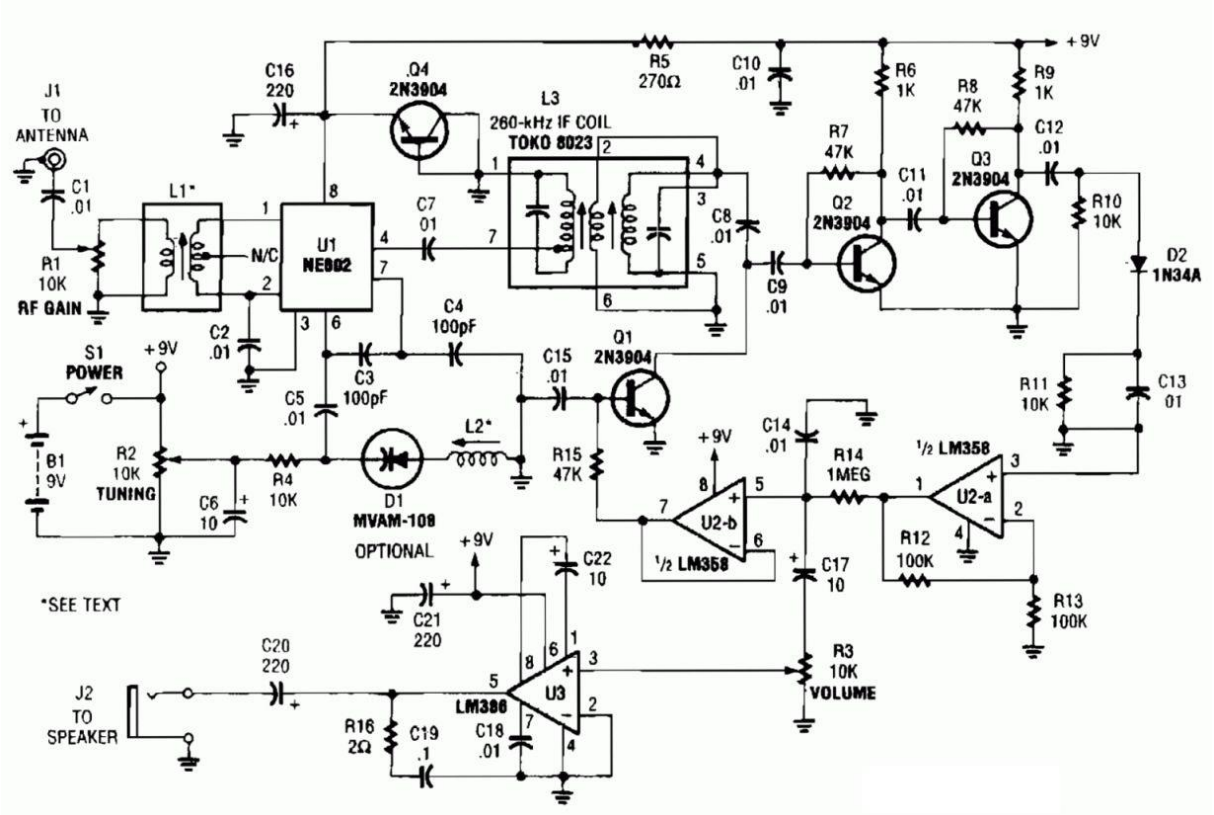
100n

Terug van weggeweest . de ZN414

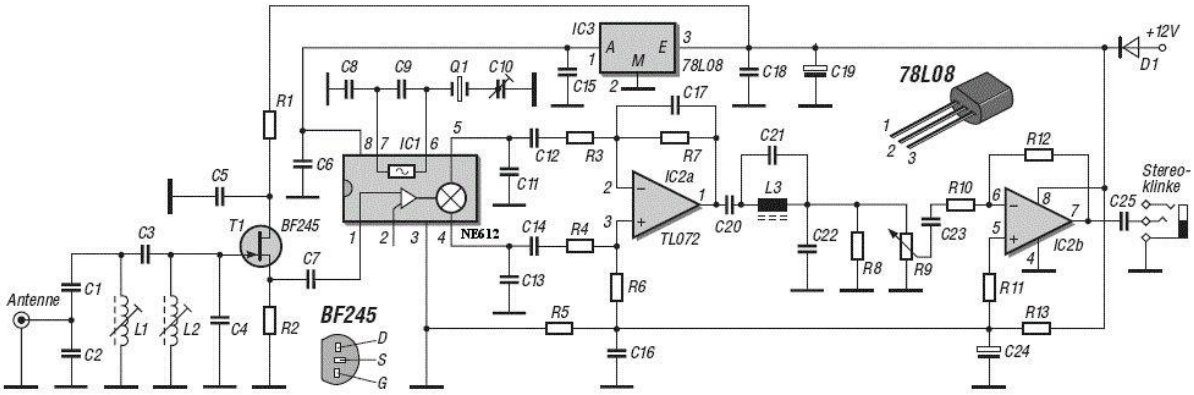
AM Kısa Dalga Süperheterodin Alıcı



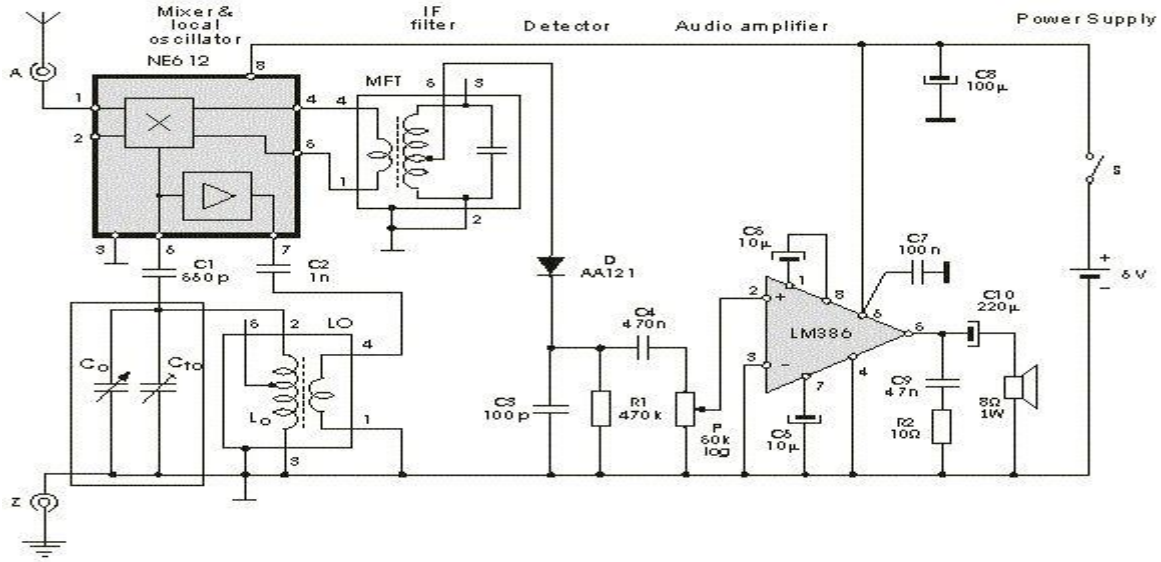
AM Kısa Dalga Süperheterodin Alıcı



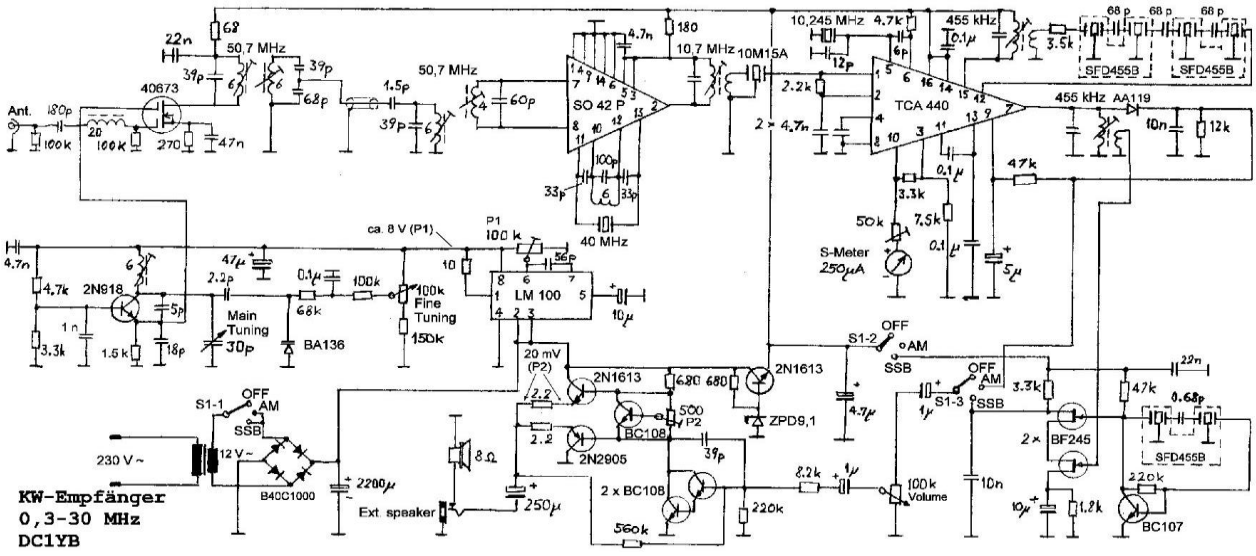
AM 1 – 15 Mhz SSB Alıcı



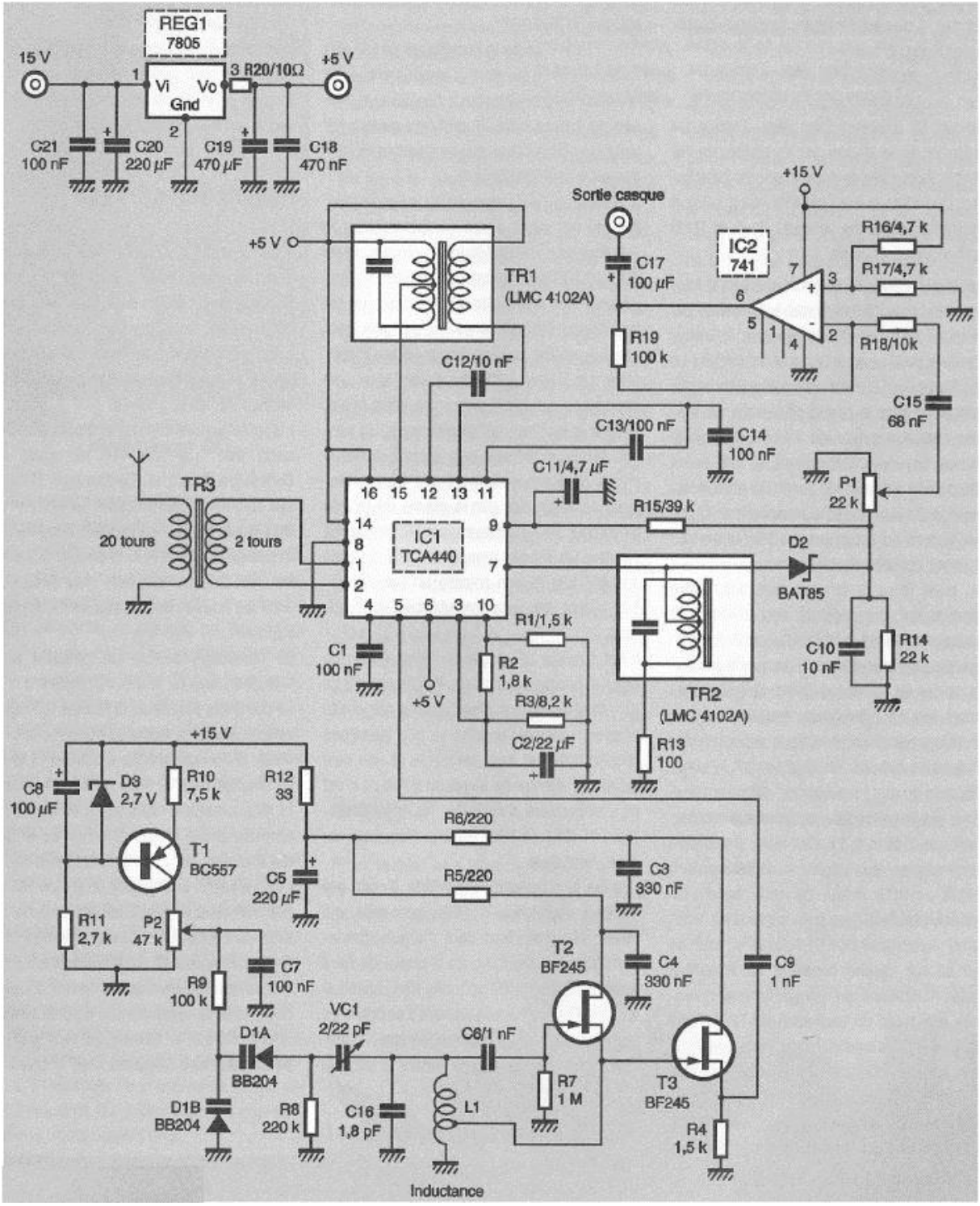
AM Kısa Dalga Alıcı



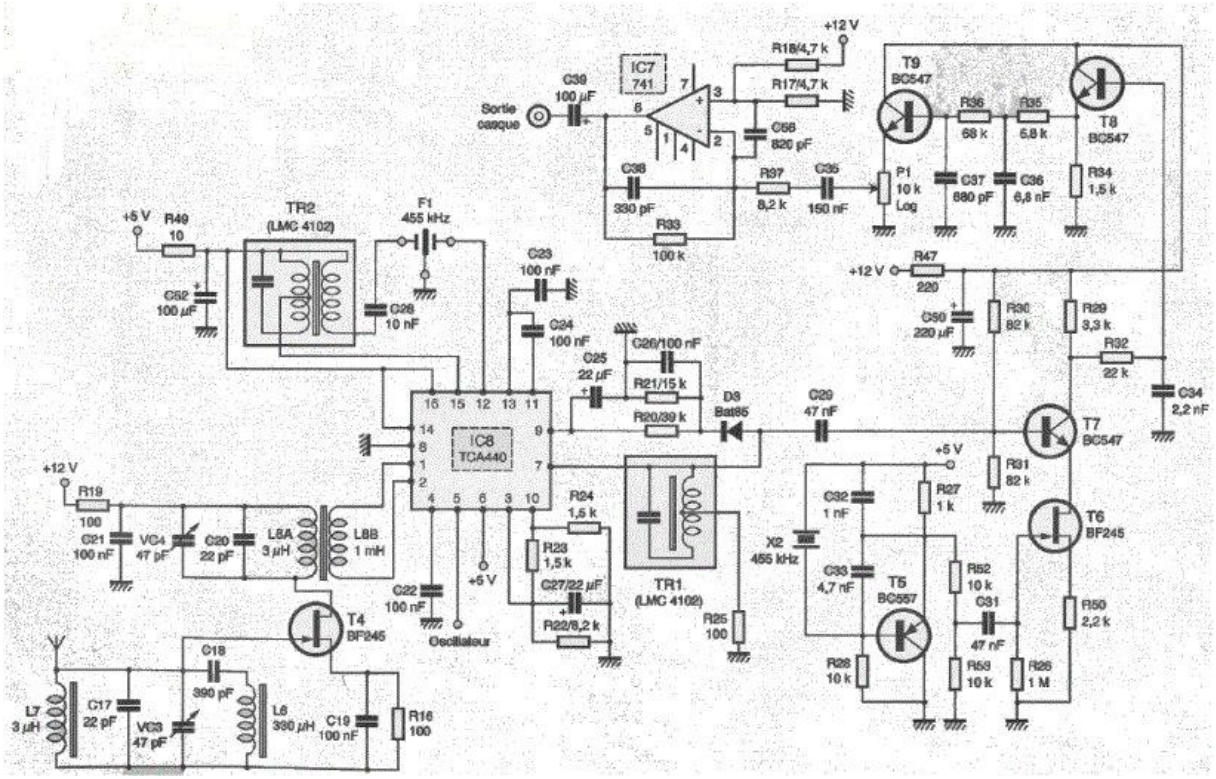
AM 0,3 – 30 Mhz Alıcı



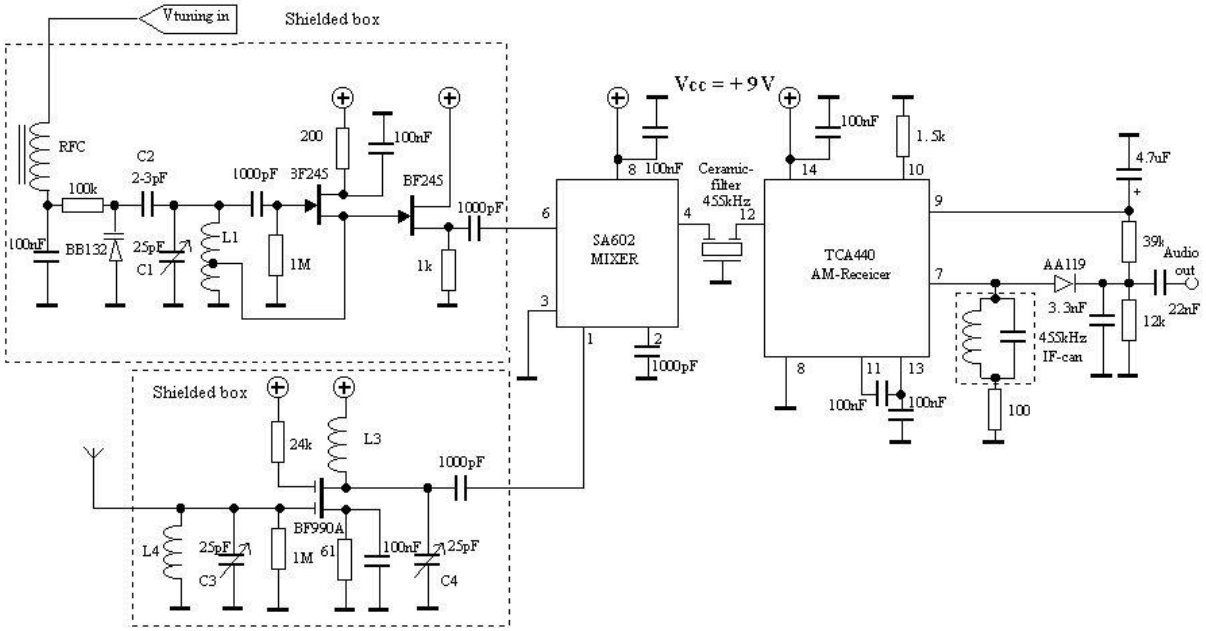
AM CB 27 Mhz Alıcı



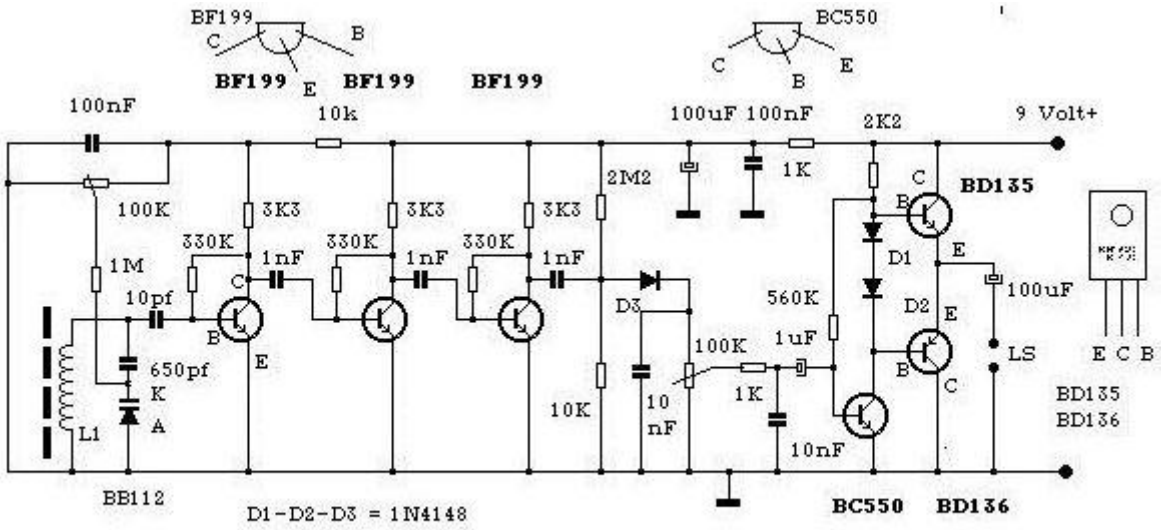
AM 15 Mhz SSB Alıcı



AM Kısa Dalga Alıcı

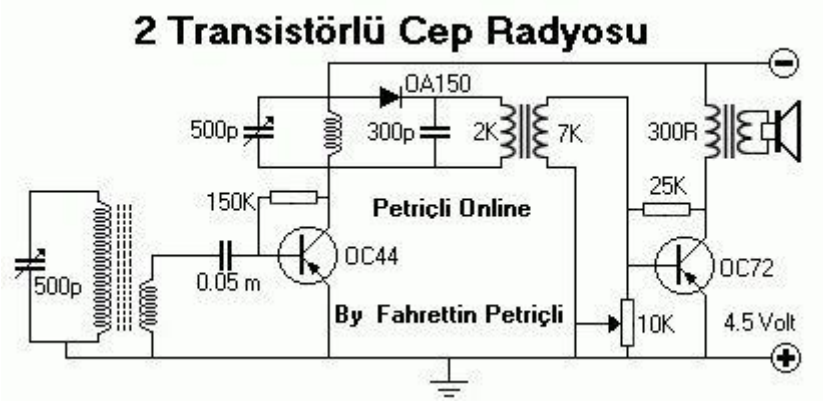


AM Ota Dalga Alıcı

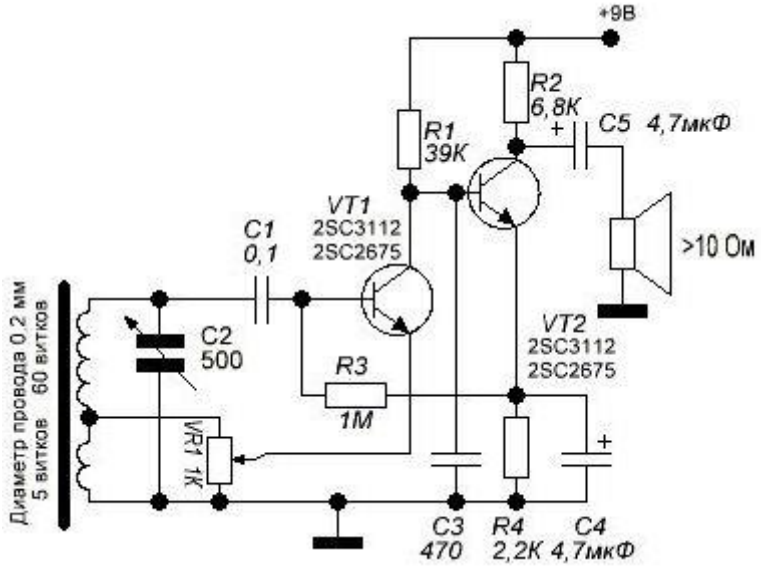


L1 is ongeveer 55 windingen op een 12 cm ferrietstaaf , met de BB112 en de potm. van 100K is het bereik ongeveer van 600 tot 1700 Kc

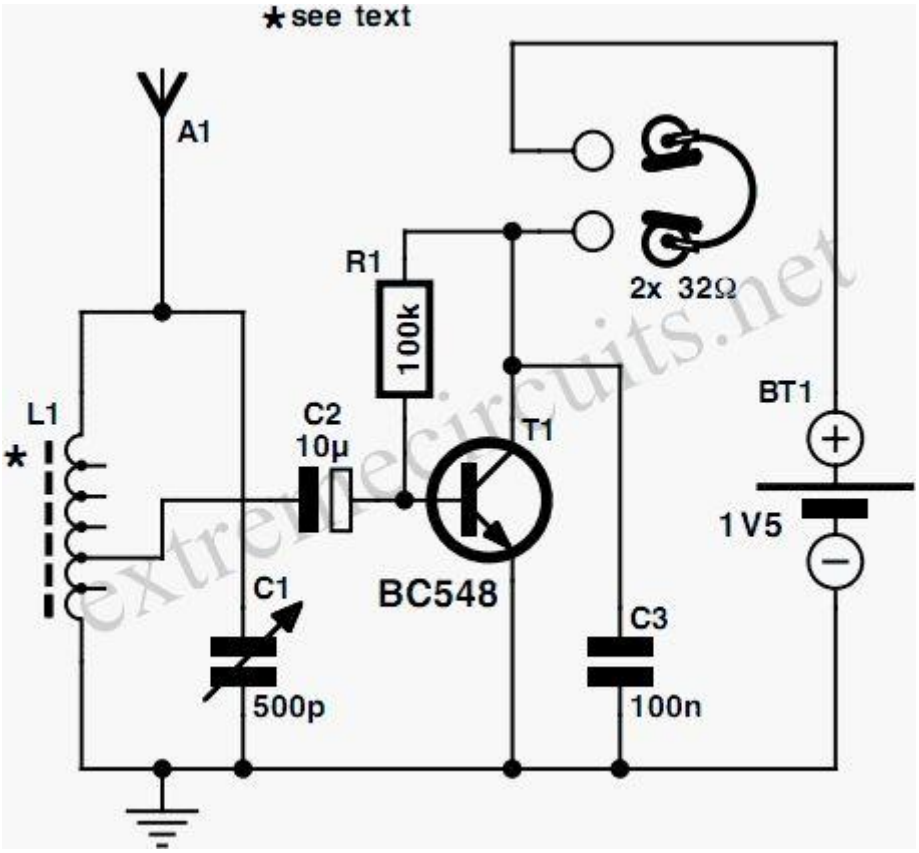
AM Ota Dalga Alıcı



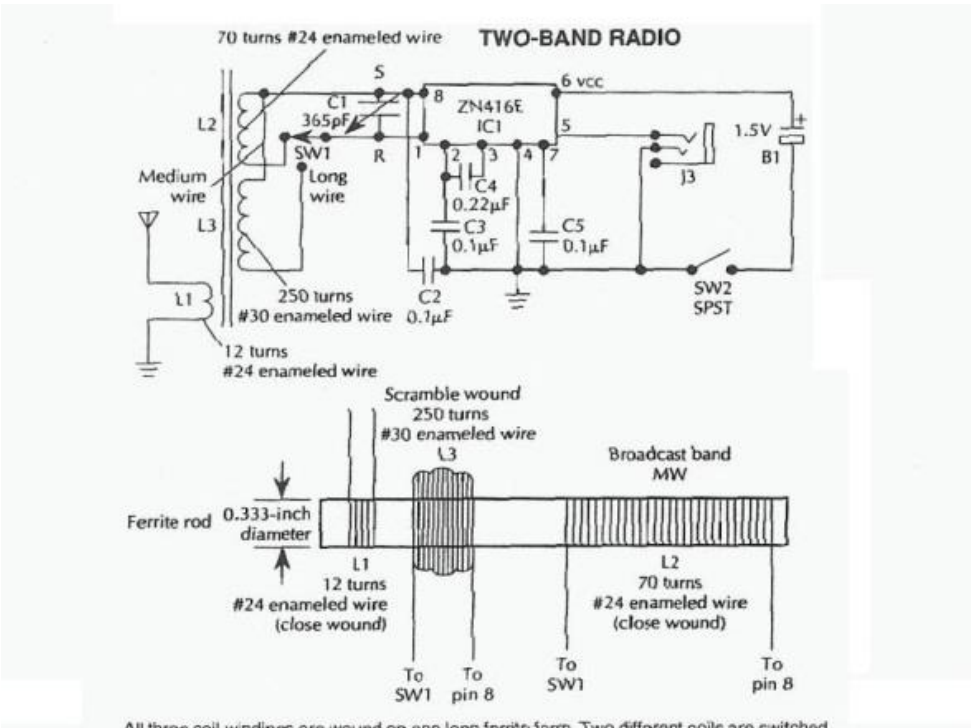
AM Ota Dalga Alıcı



AM Ota Dalga Alıcı



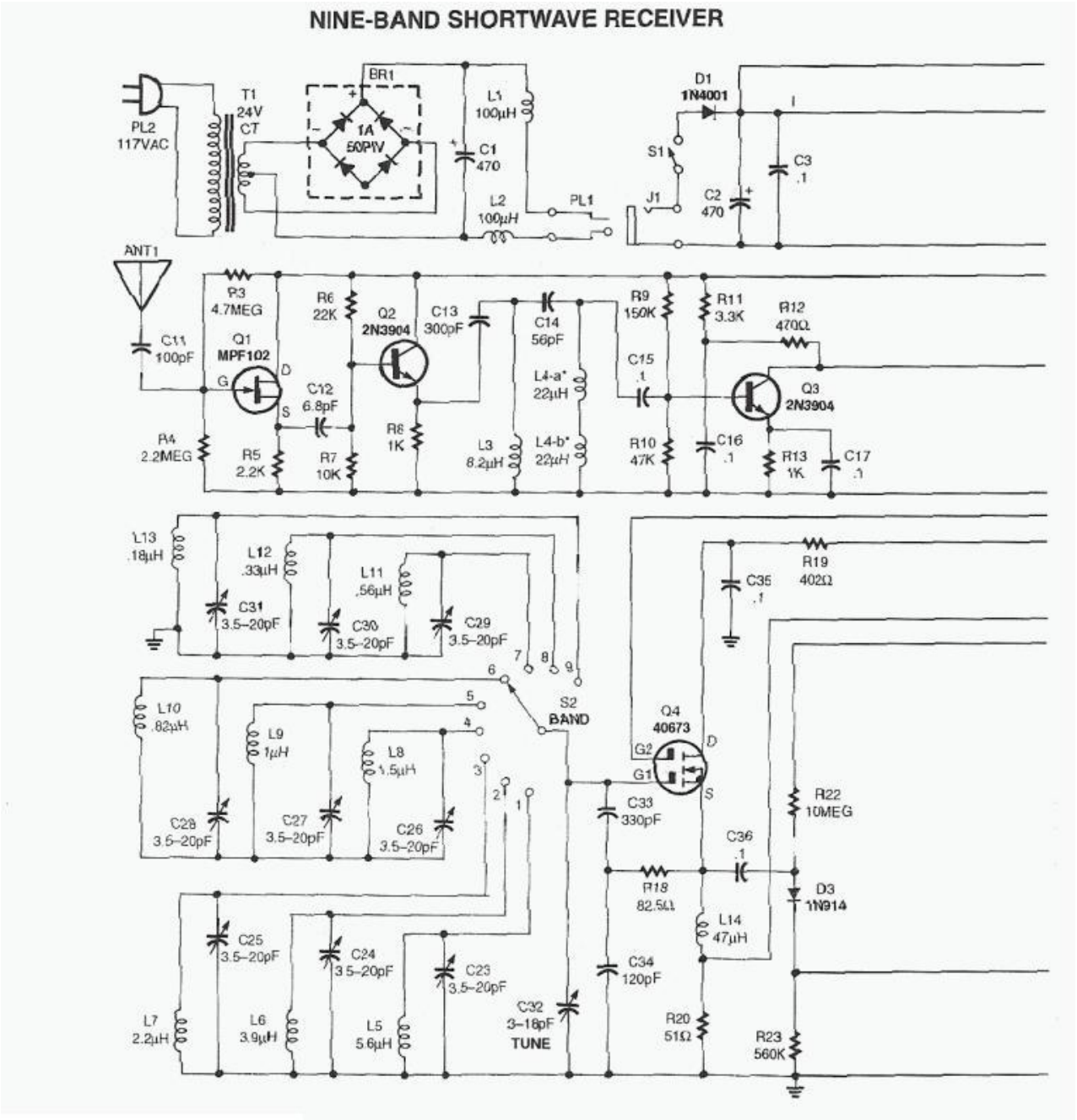
AM Ota ve Uzun Dalga Alıcı



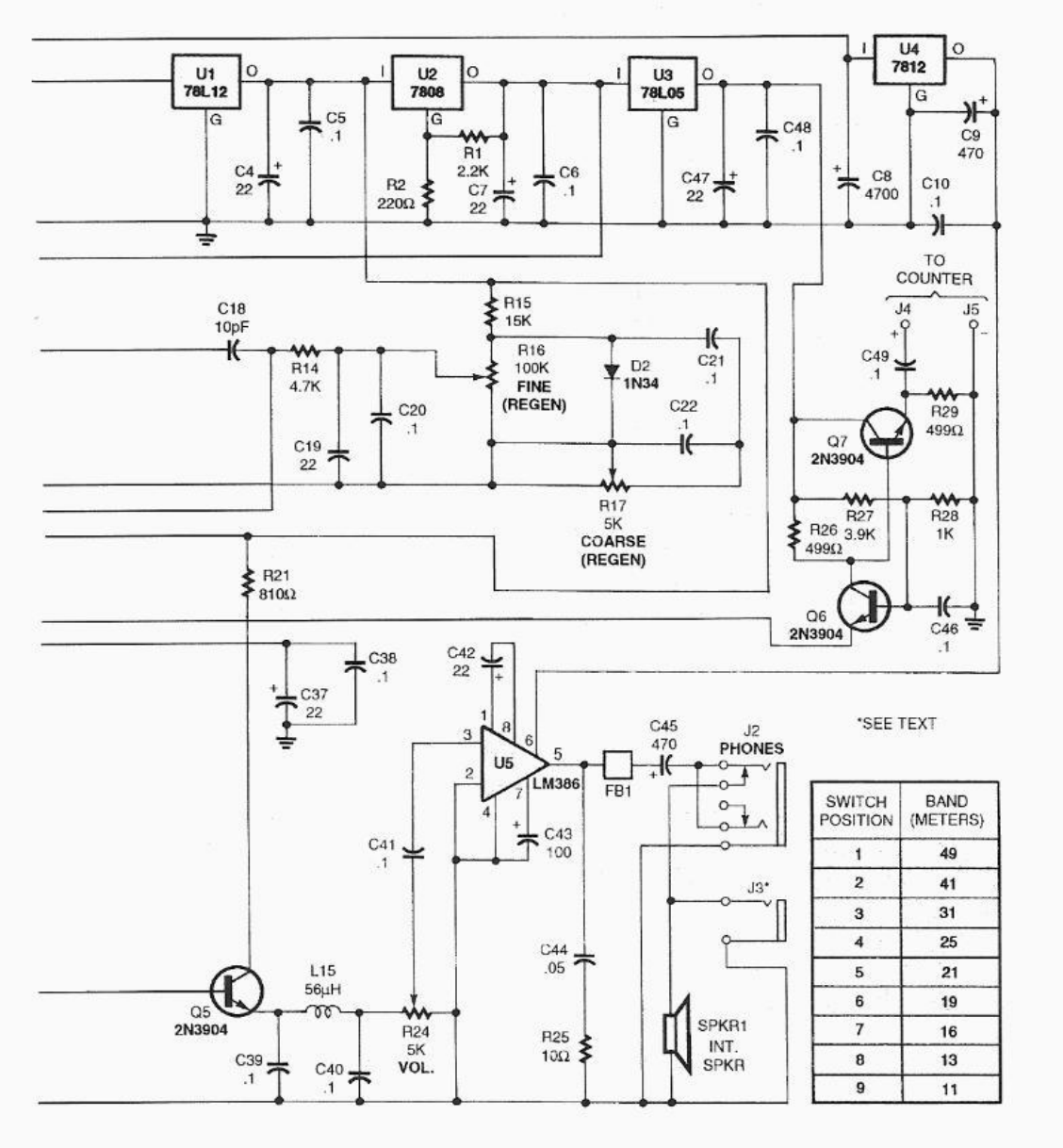
All three coil windings are wound on one long ferrite form. Two different coils are switched into the circuit, covering the longwave (lw) and medium-wave (mw) broadcast band.

This TRF receiver covers the AM broadcast band and longwave bands (used in Europe and Asia for broadcasting). A loop antenna is used for reception and an external antenna can be connected. Frequency coverage is 150 to 1600 kHz.

AM Kısa Dalga Alıcı (9 Kanal)

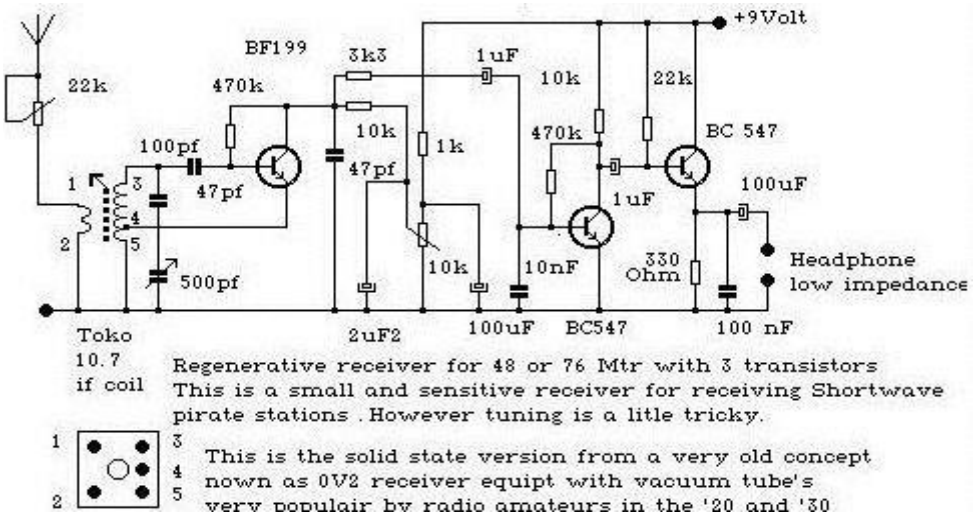


Dual-gate MOSFET Q4 is used as a regenerative amplifier in this circuit. An active antenna feeds the signal to Q4, and a short whip antenna is adequate. Detector Q5 feeds volume control R24, and audio amplifier U5, an LM386. The frequency range is 49 to 11 meters in nine bands (6 to 27 MHz).

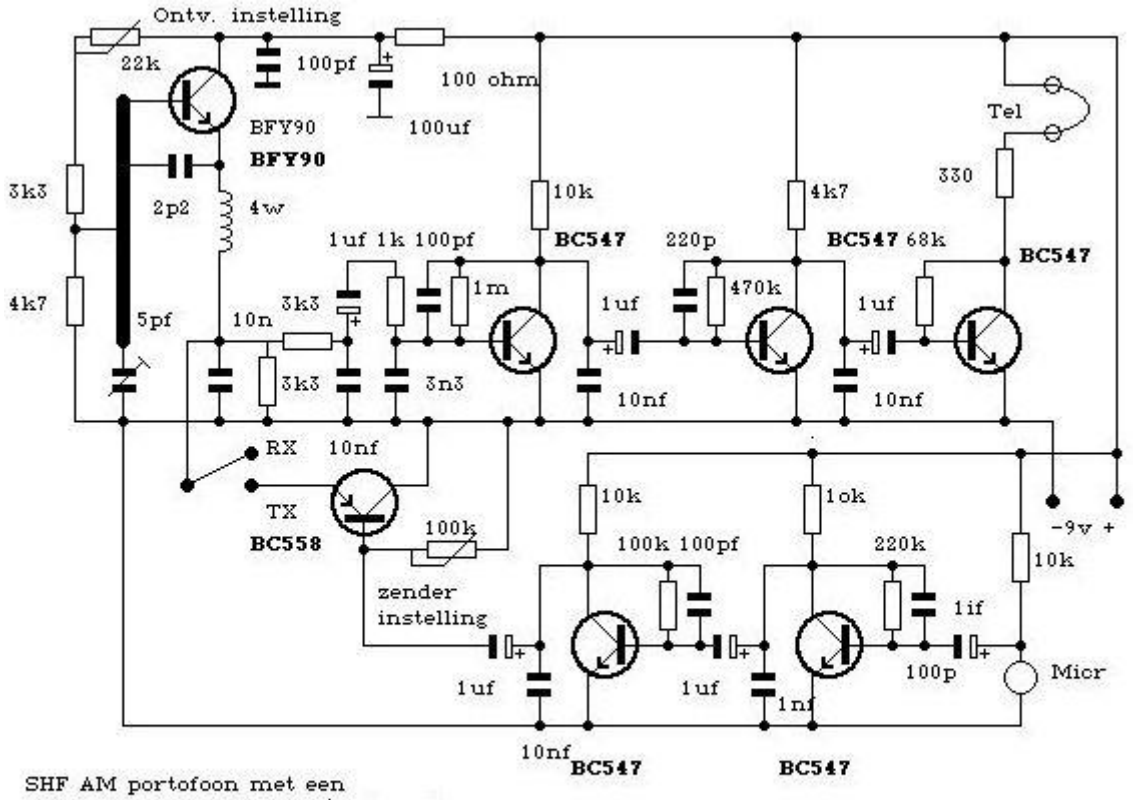


SWITCH POSITION	BAND (METERS)
1	49
2	41
3	31
4	25
5	21
6	19
7	16
8	13
9	11

AM 48-76 Metre Kısa Dalga Alıcı

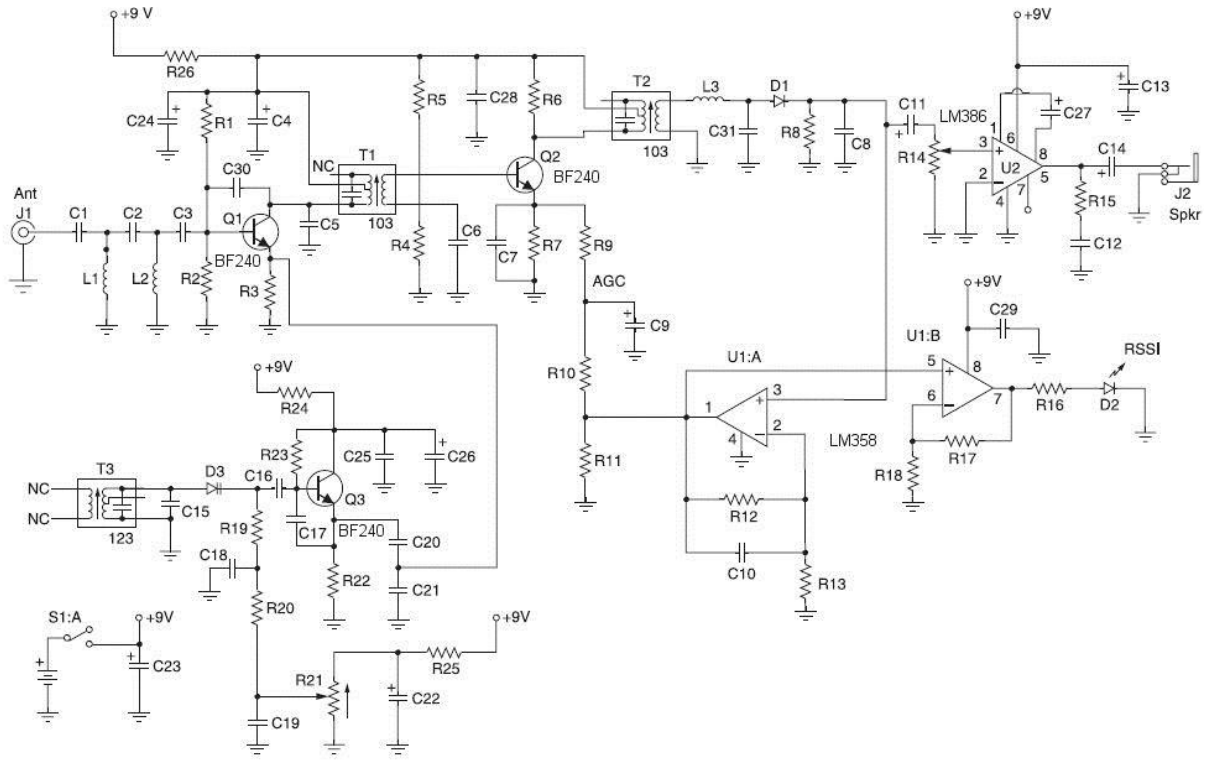


AM Kısa Dalga Alıcı

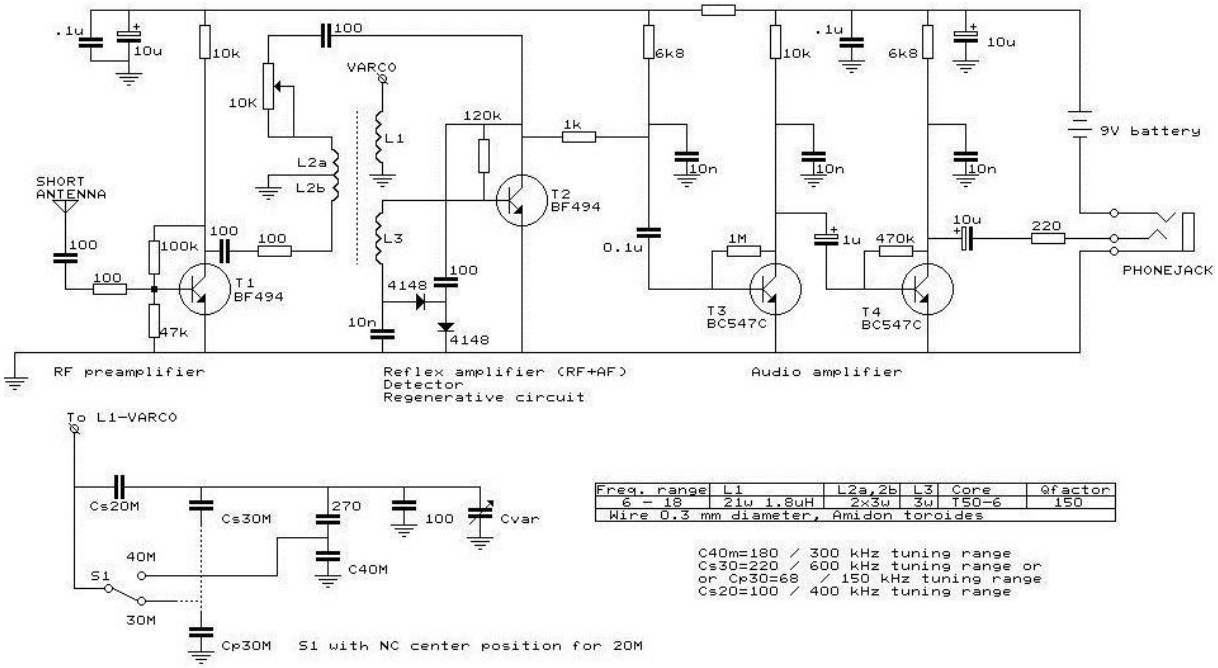


SHF AM portofoon met een
Superregenerative zend/ontvang trap
Afhankelijk van de lengte van de stripline (2 to 5) cm bruikbaar voor
frequenties's vann 800Mc tot 3300 Mc
Bruikbaar voor afstanden van een paar honderd meter tot meerdere kilometers
bij een vrij zicht . Door de variabele frequentie praktisch niet hoorbaar op een scanner

AM Kısa Dalga Süperheterodin Alıcı



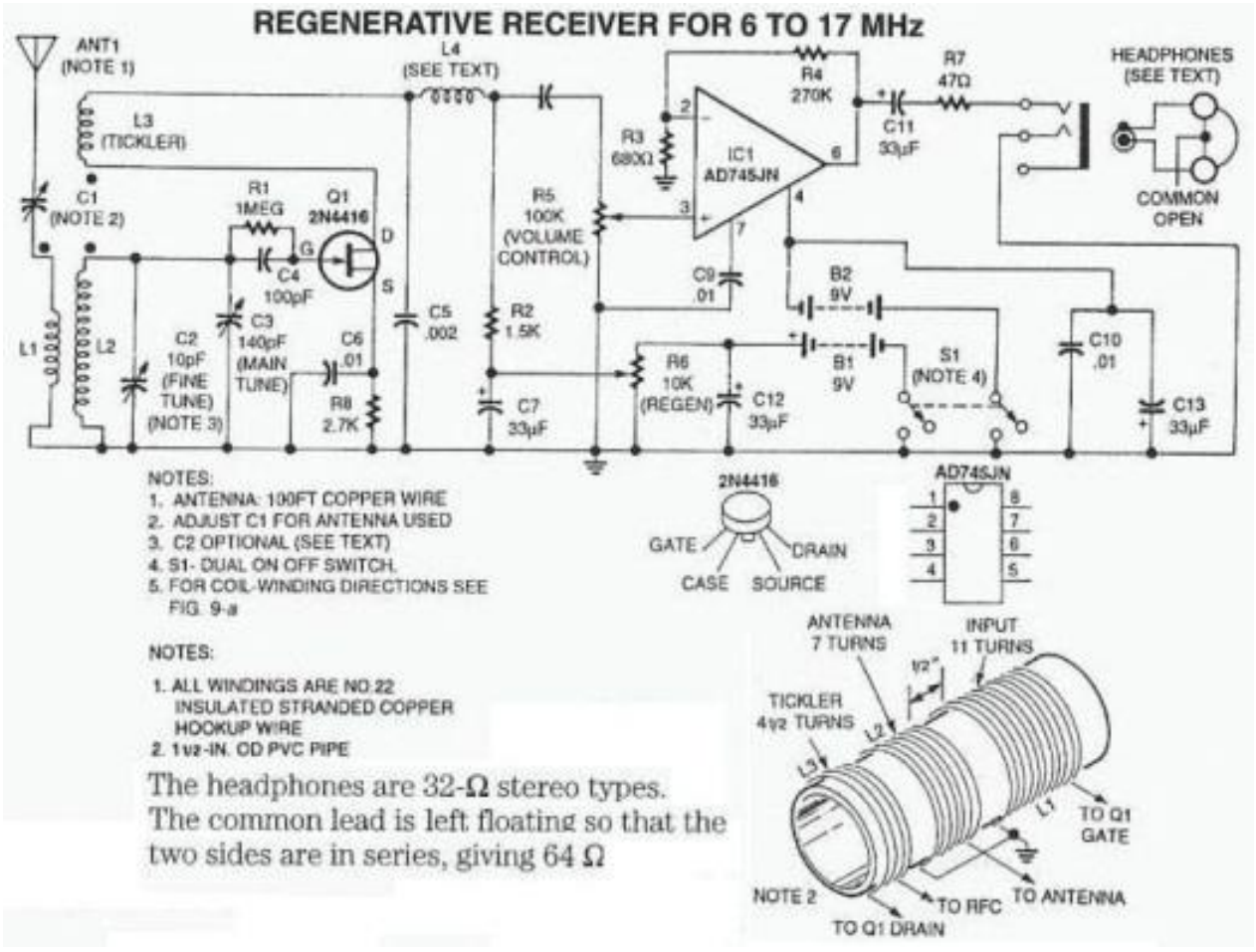
AM Kısa Dalga Regeneratif Alıcı



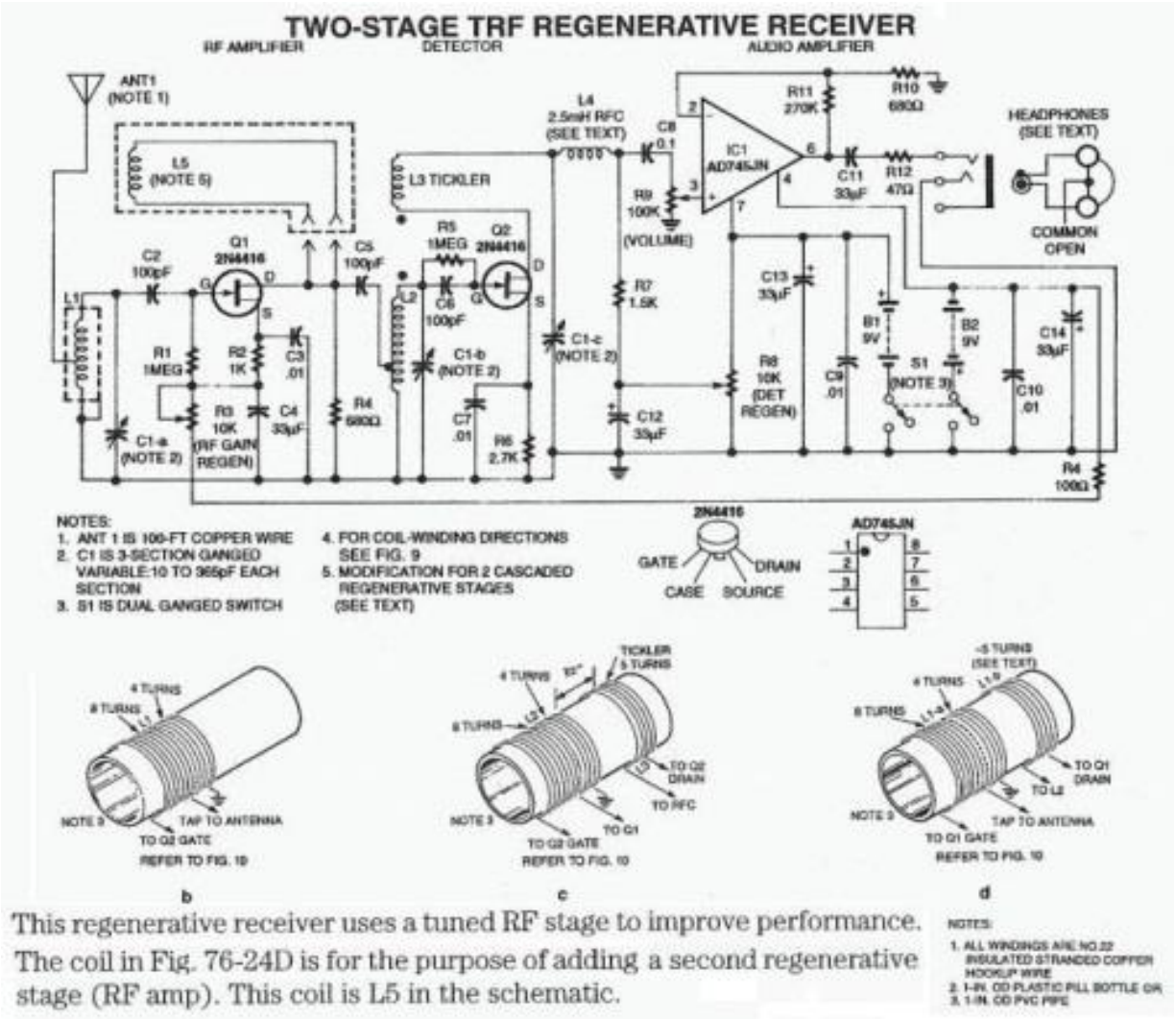
Freq. range	L1	L2a,2b	L3	Core	Qfactor
6 - 18	21w 1.8uH	2x3w	3w	T50-6	150
Wire 0.3 mm diameter, Amidon toroides					

C40m=180 / 300 kHz tuning range
Cs30=220 / 600 kHz tuning range or
or Cp30=68 / 150 kHz tuning range
Cs20=100 / 400 kHz tuning range

AM 6-17 Mhz Regeneratif Alıcı

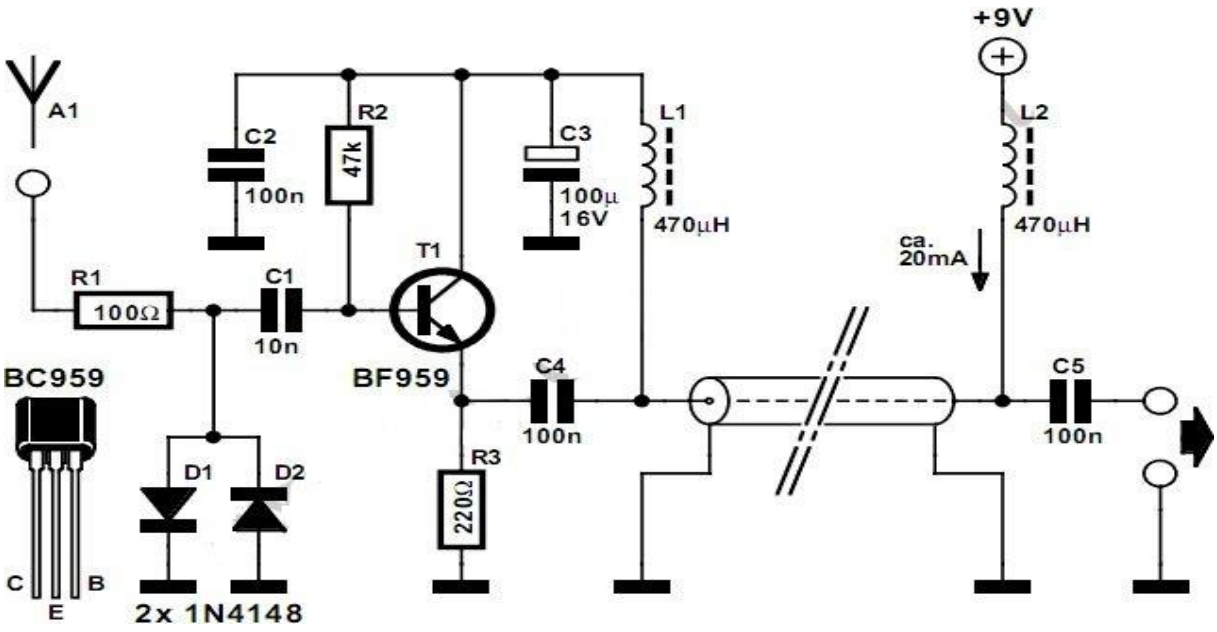


AM 6-17 Mhz Regeneratif Alıcı

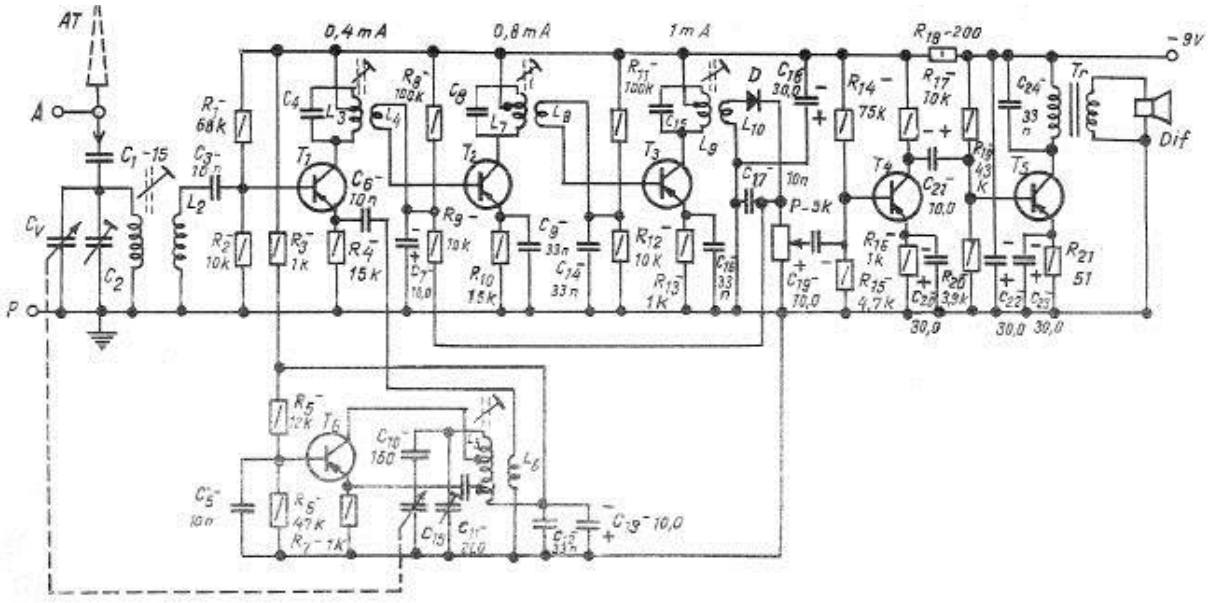


This regenerative receiver uses a tuned RF stage to improve performance. The coil in Fig. 76-24D is for the purpose of adding a second regenerative stage (RF amp). This coil is L5 in the schematic.

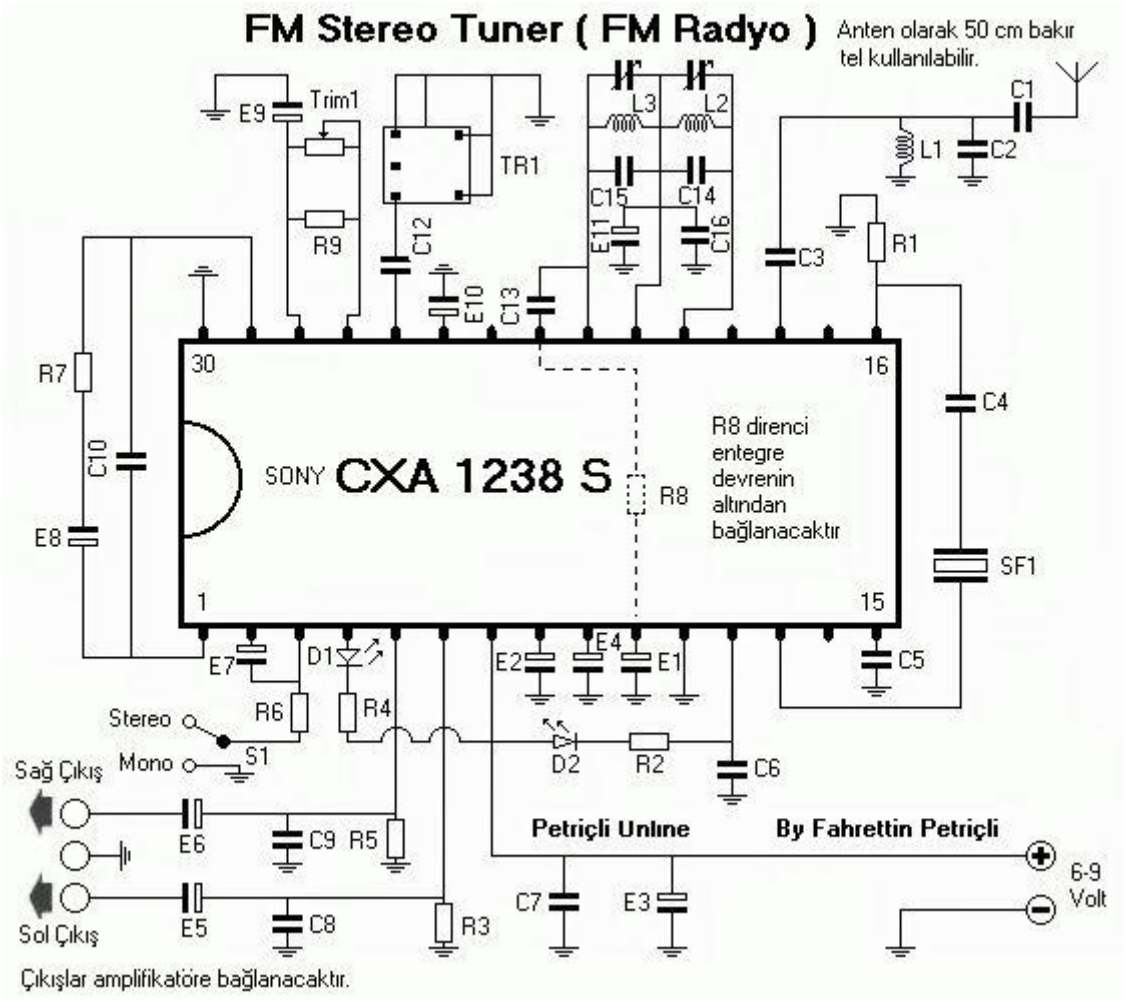
AM Kısa Dalga Alıcı



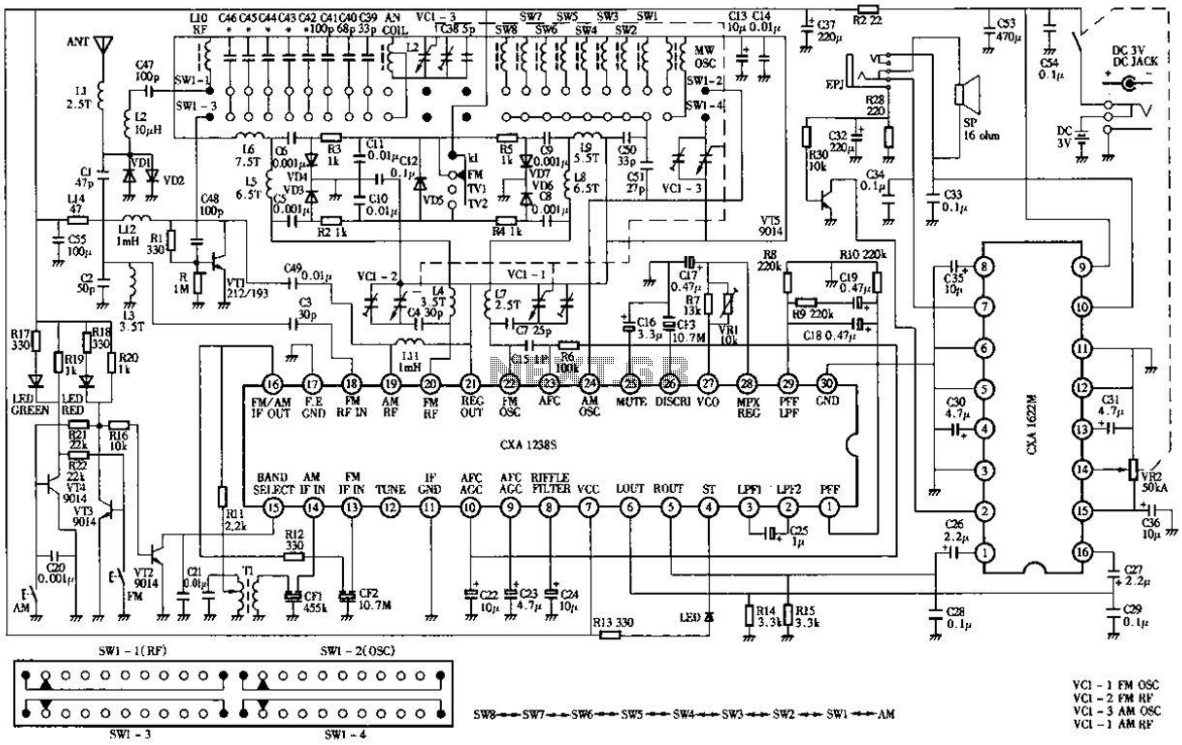
AM Kısa Dalga Süperheterodin Alıcı



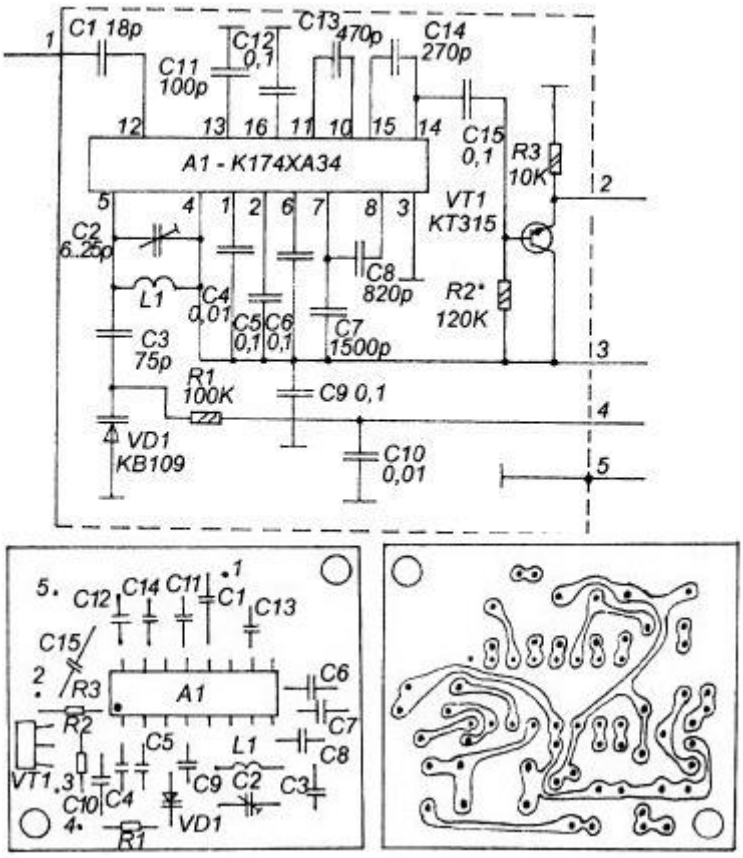
FM Stereo 88-108 Mhz Alıcı



FM Stereo 88-108 Mhz Alıcı



FM Stereo 88-108 Mhz Alıcı



FM Stereo 88-108 Mhz Alıcı

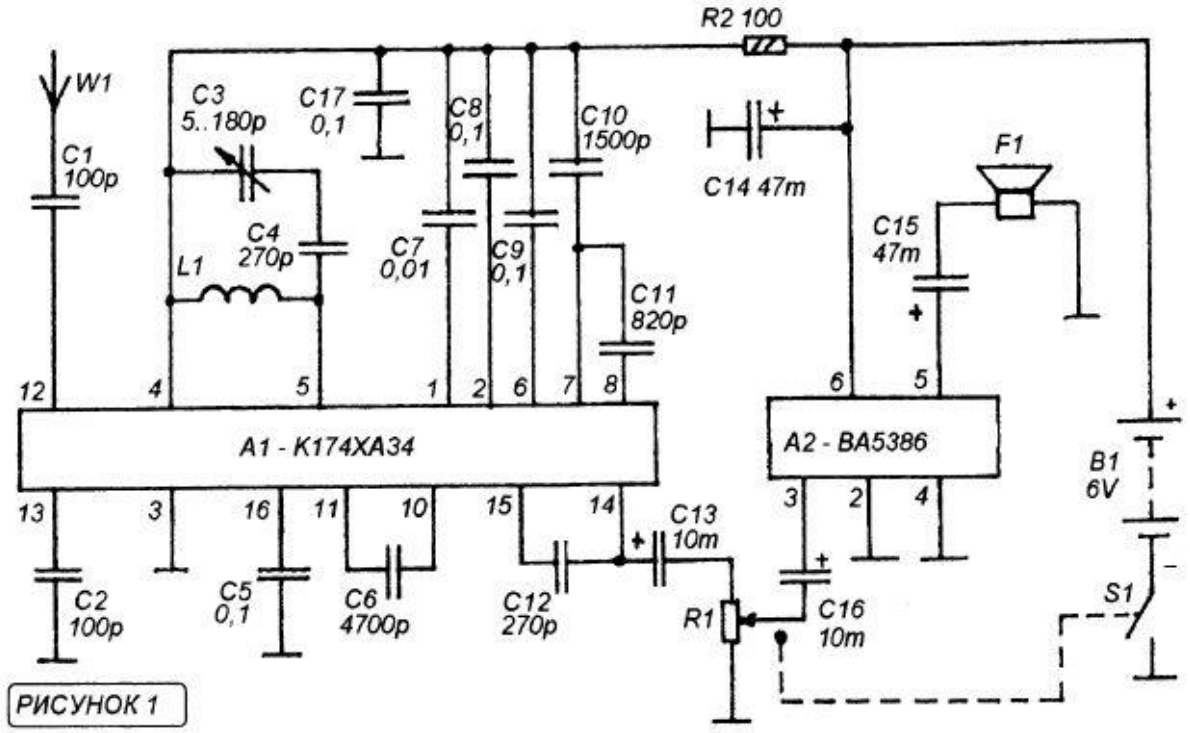
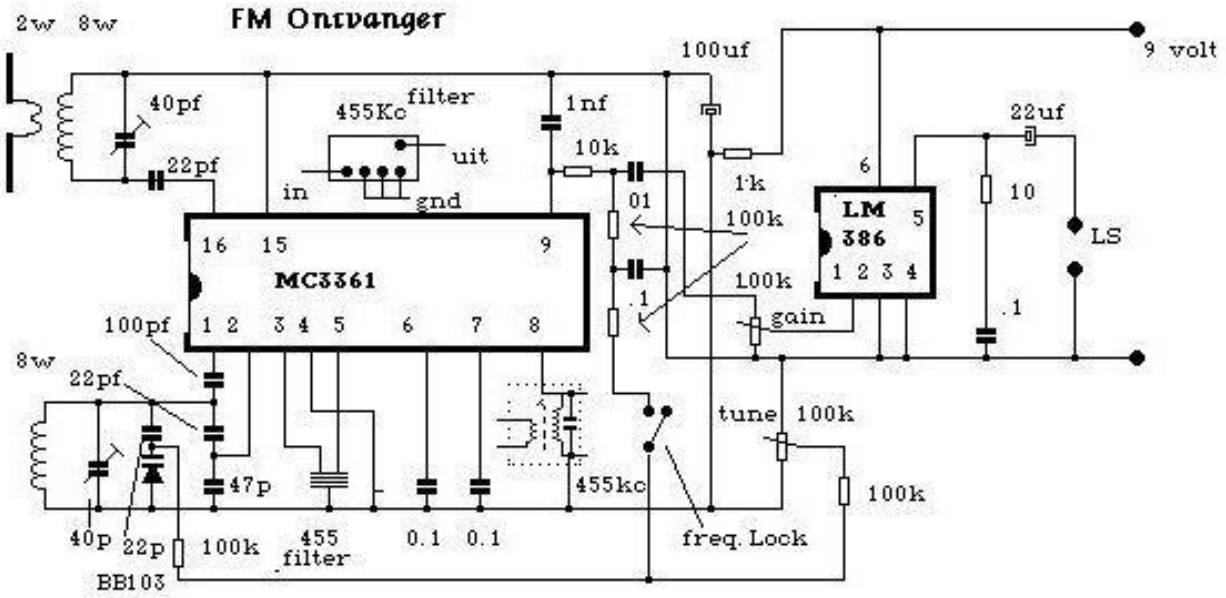
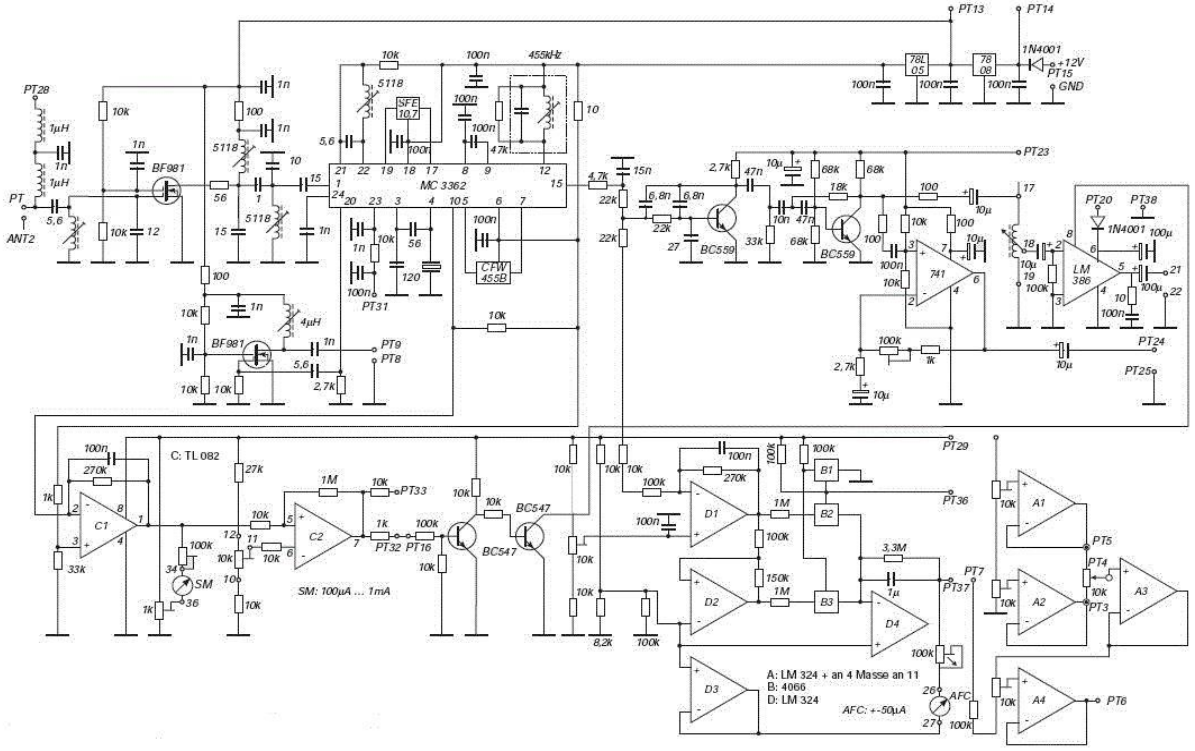


РИСУНОК 1

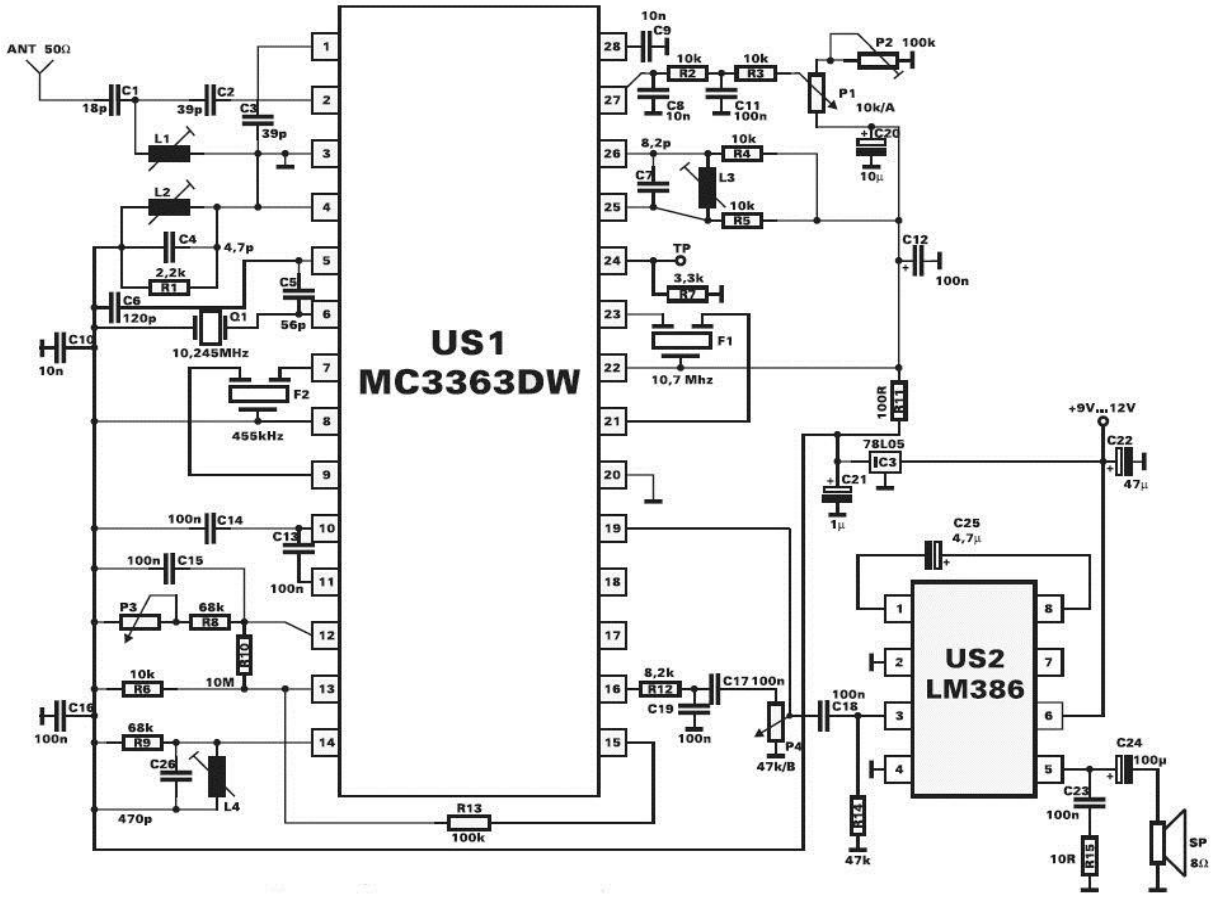
FM Stereo 88-108 Mhz Alıcı



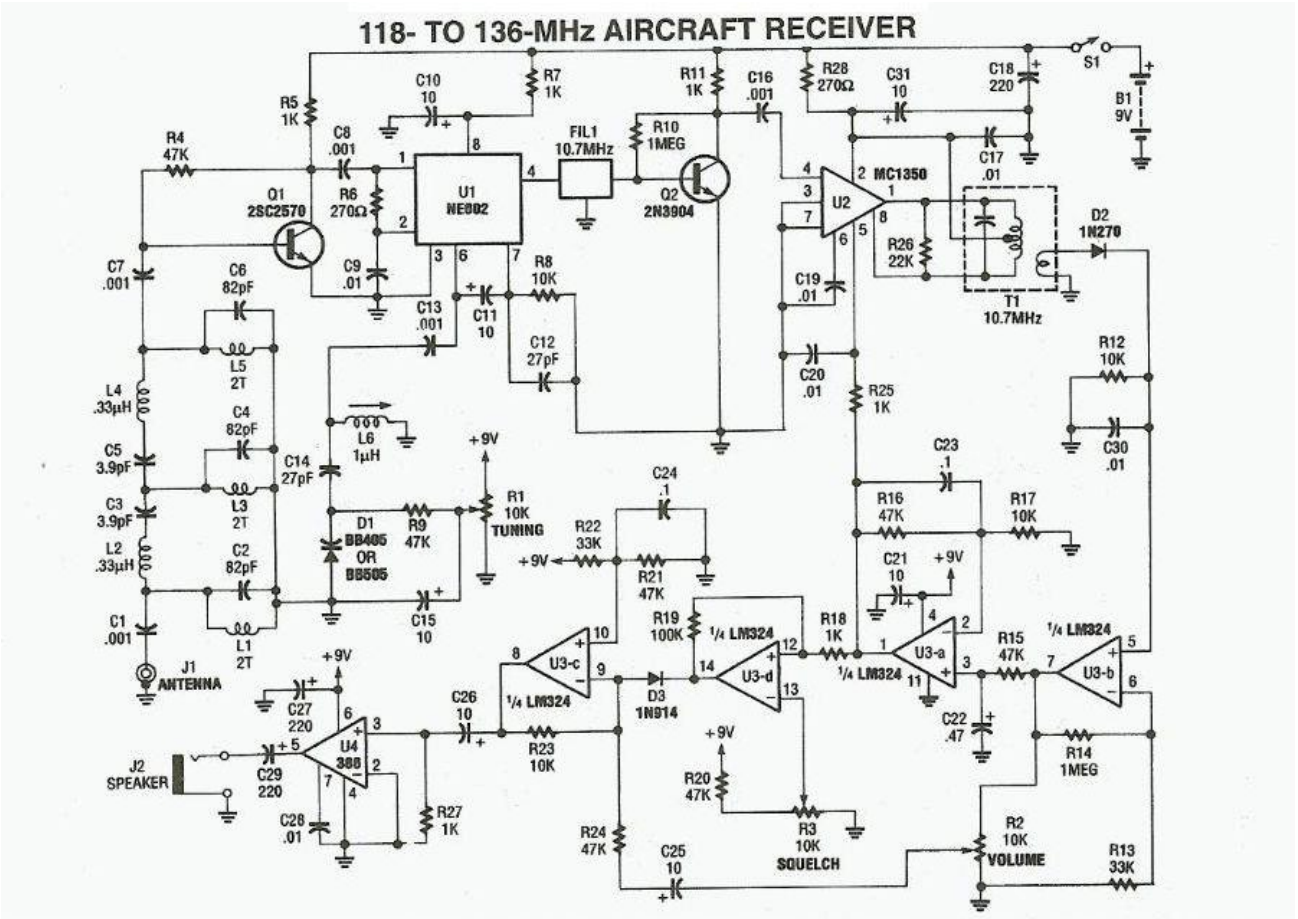
FM 1-137 Mhz Alıcı



FM 88-108 Mhz Alıcı

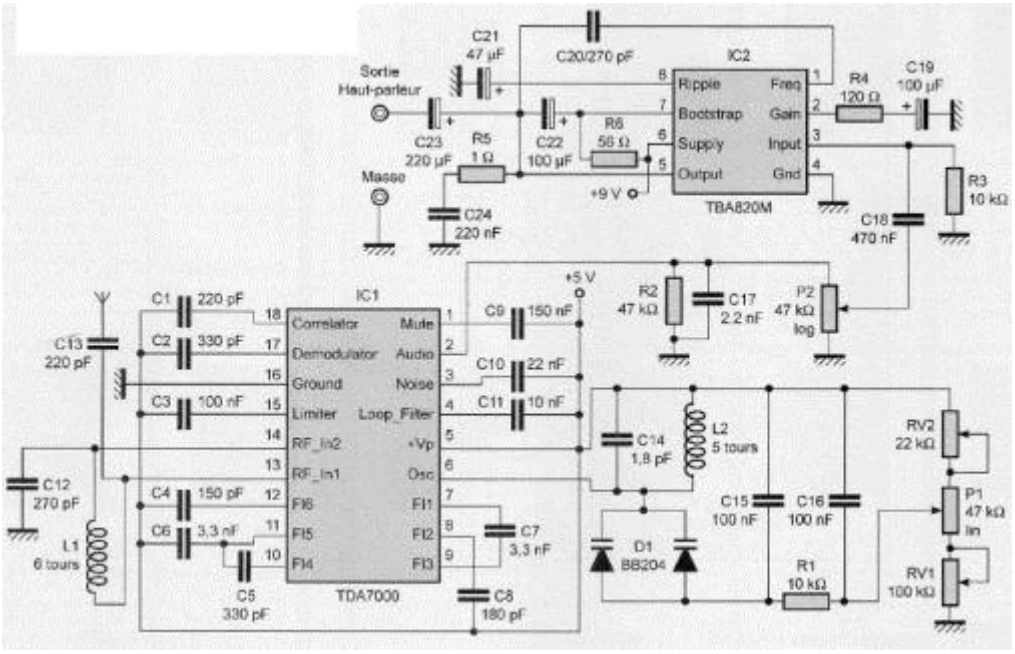


FM 188-136 Mhz Alıcı

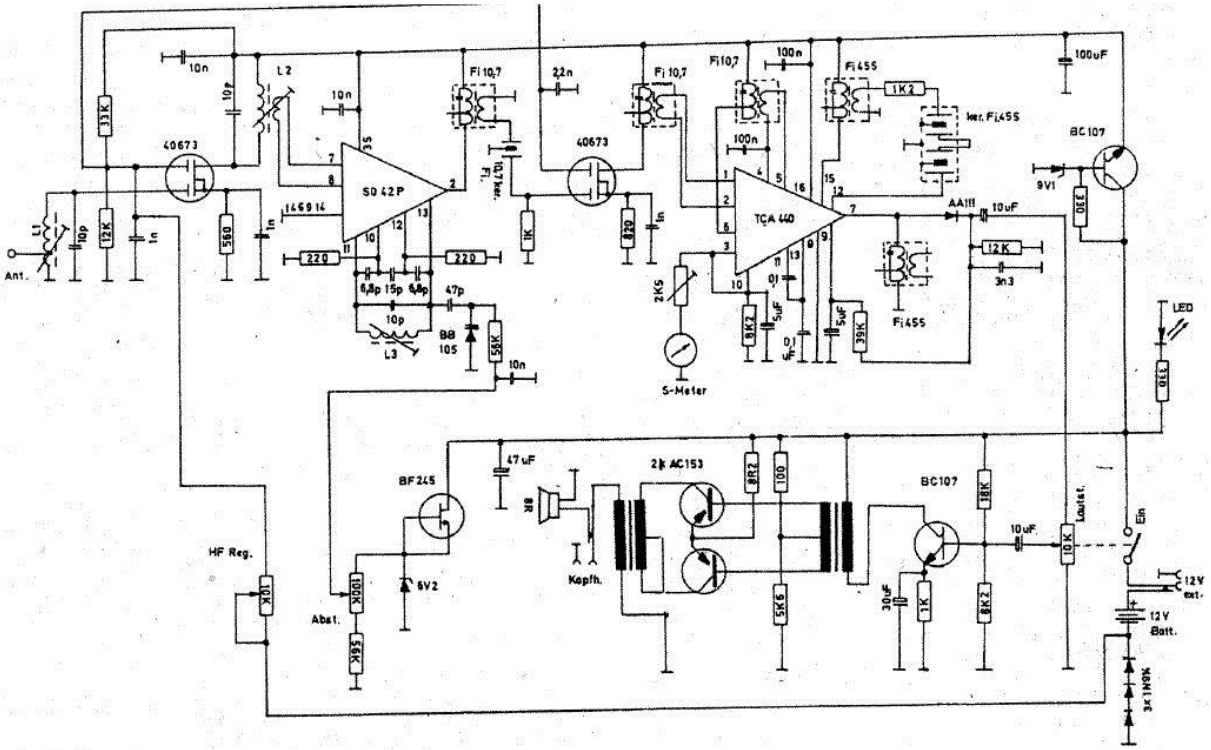


This receiver covers the 118- to 136-MHz AM aviation band. It has a 10.7-MHz IF amplifier. L1, L3, and L5 are 1½ turns of #24 wire. F1L1 is a 10.7-MHz ceramic filter. IF bandwidth will be about 250 kHz.

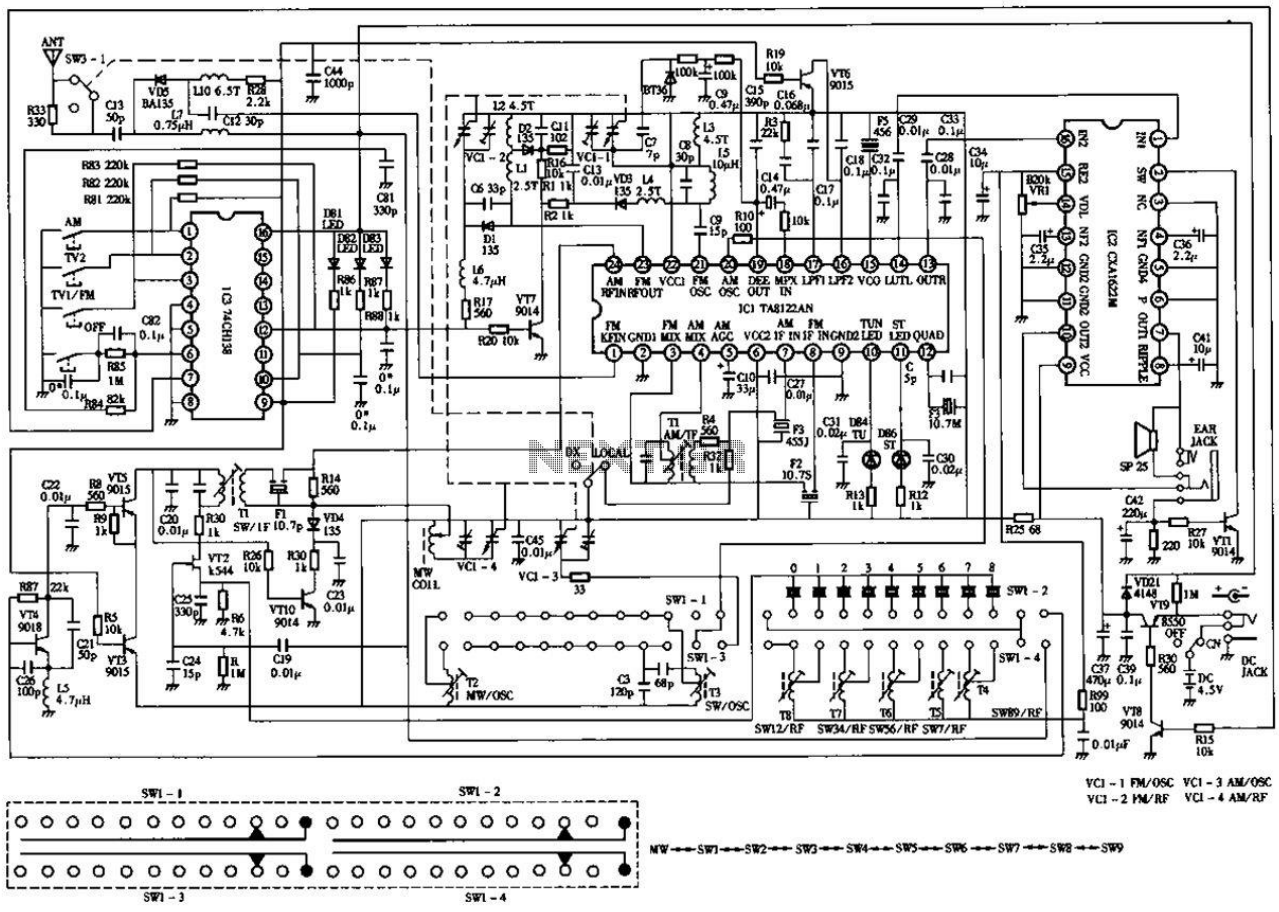
FM 88-108 Mhz Alıcı



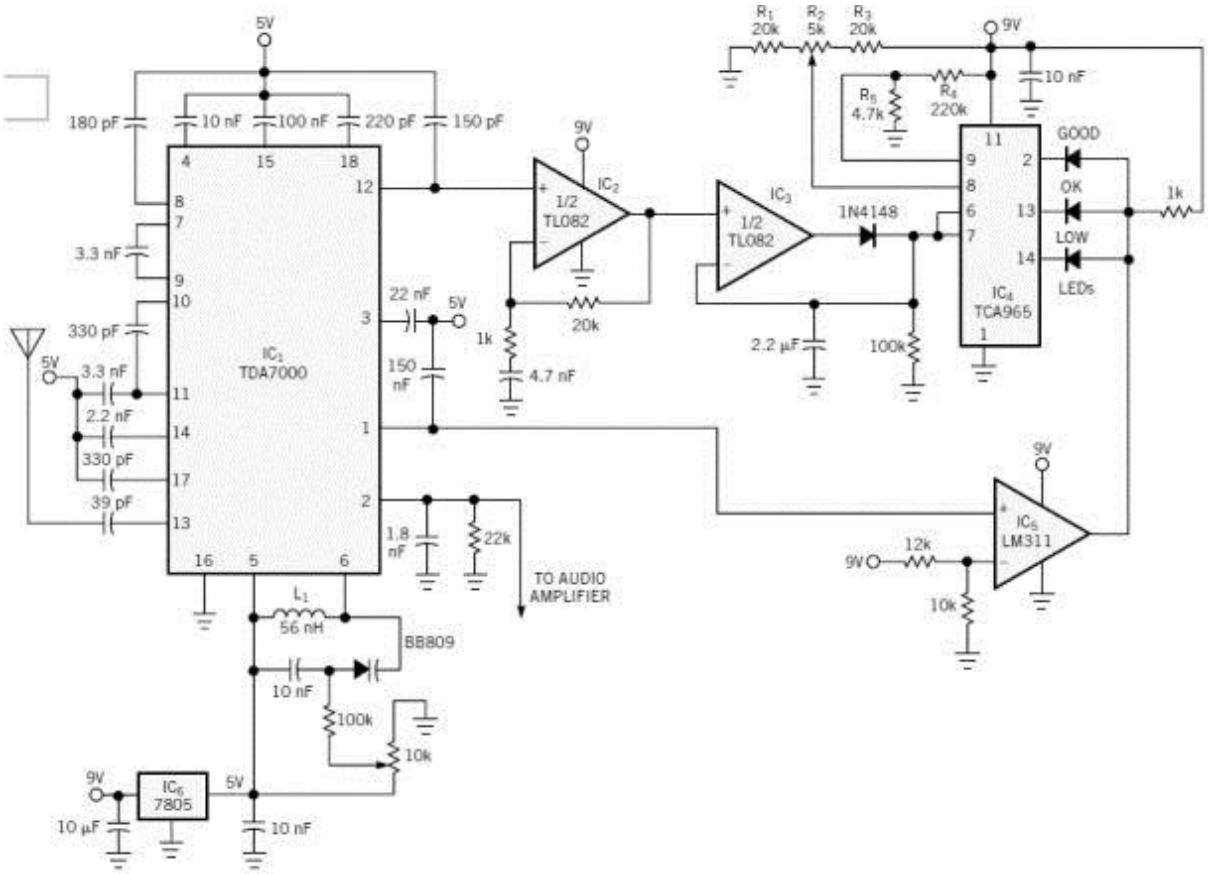
FM 1-150 Mhz Alıcı



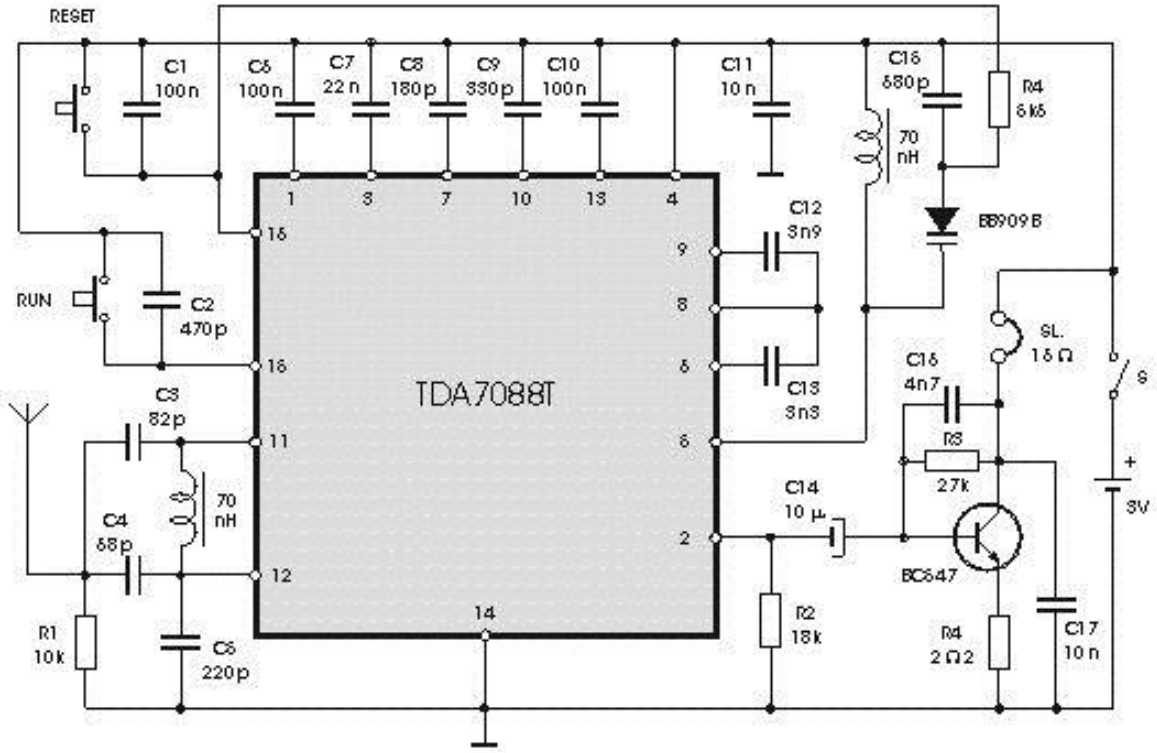
FM 88-108 Mhz Alıcı



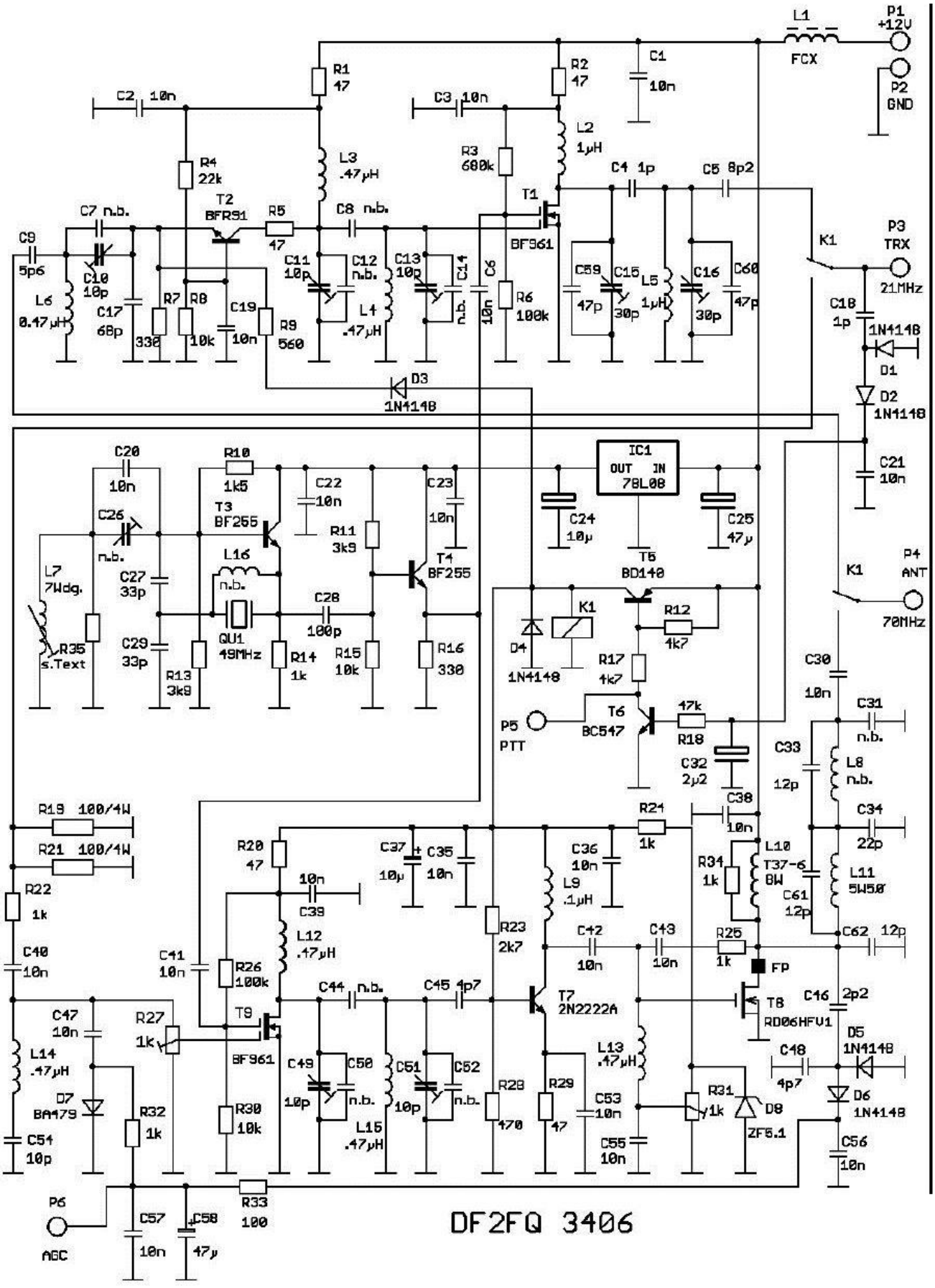
FM 88-108 Mhz Alıcı



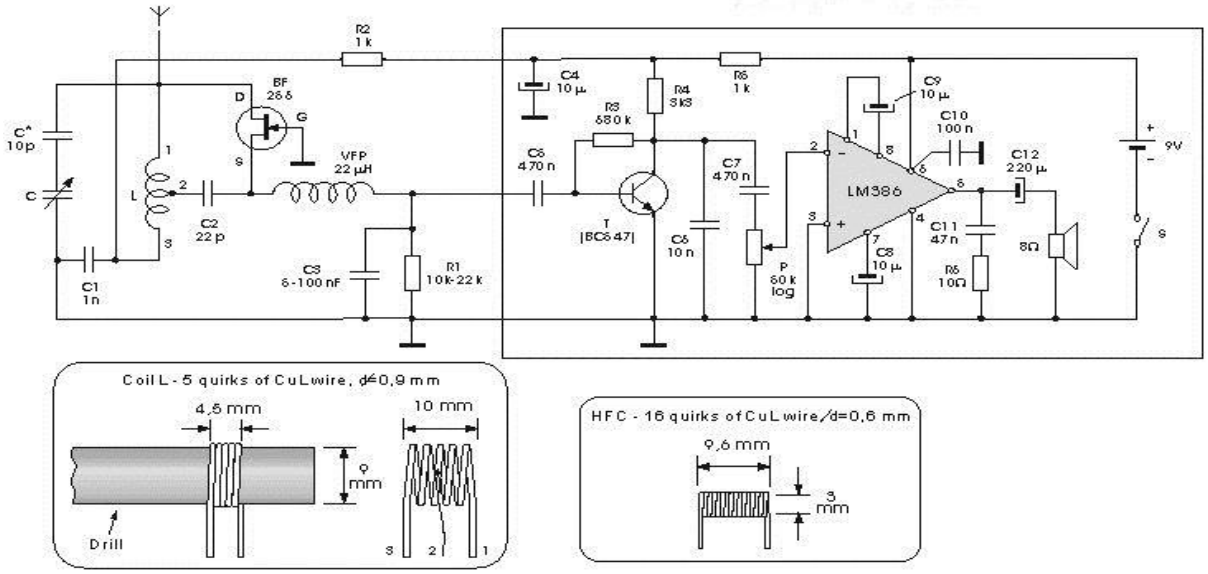
FM 88-108 Mhz Alıcı



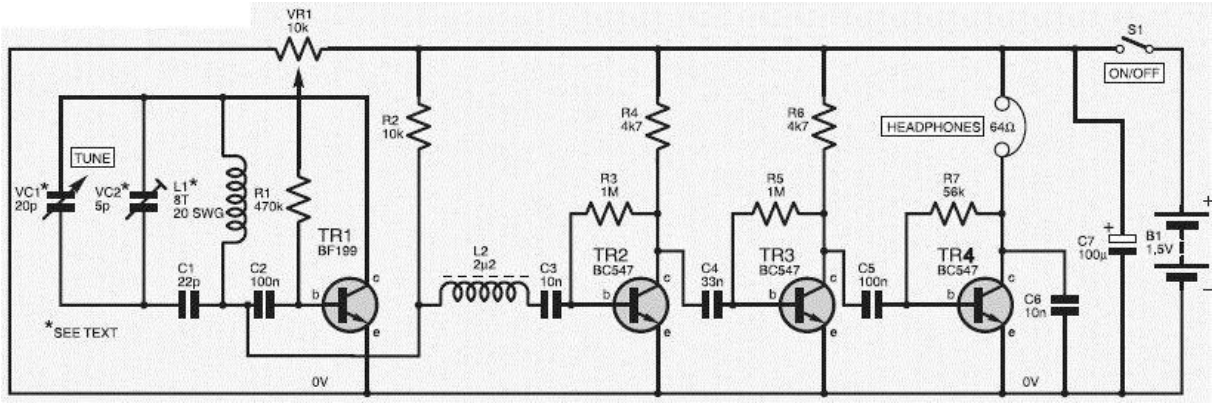
FM 1-70 Mhz Alıcı



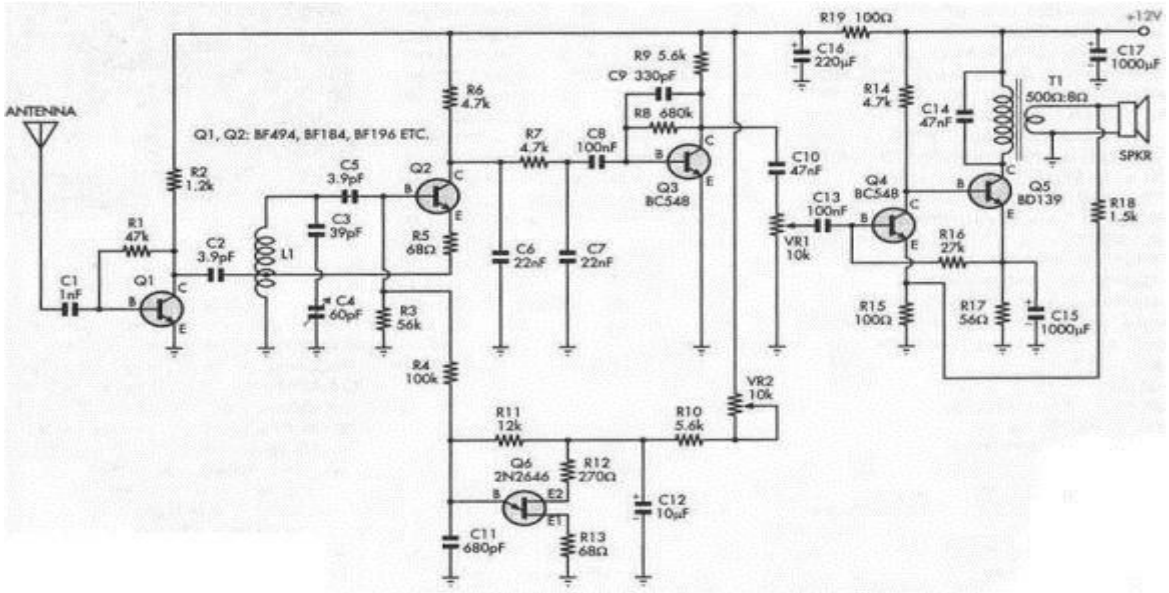
FM 88-108 Mhz Alıcı

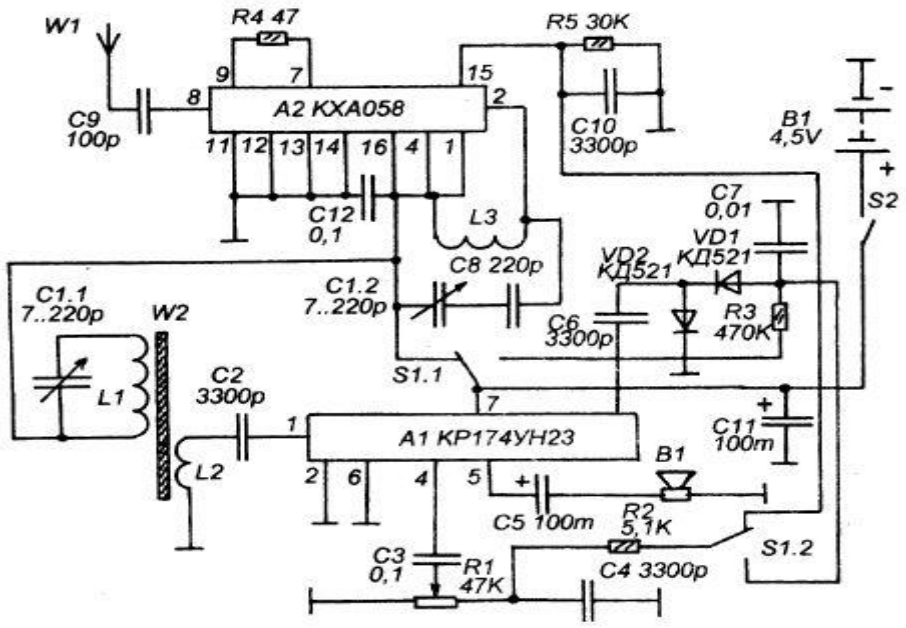


FM 88-108 Mhz Regeneratif Alıcı

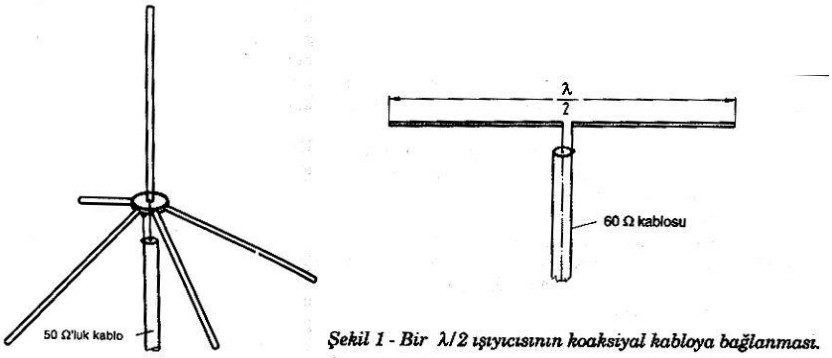


FM 88-108 Mhz Regeneratif Alıcı

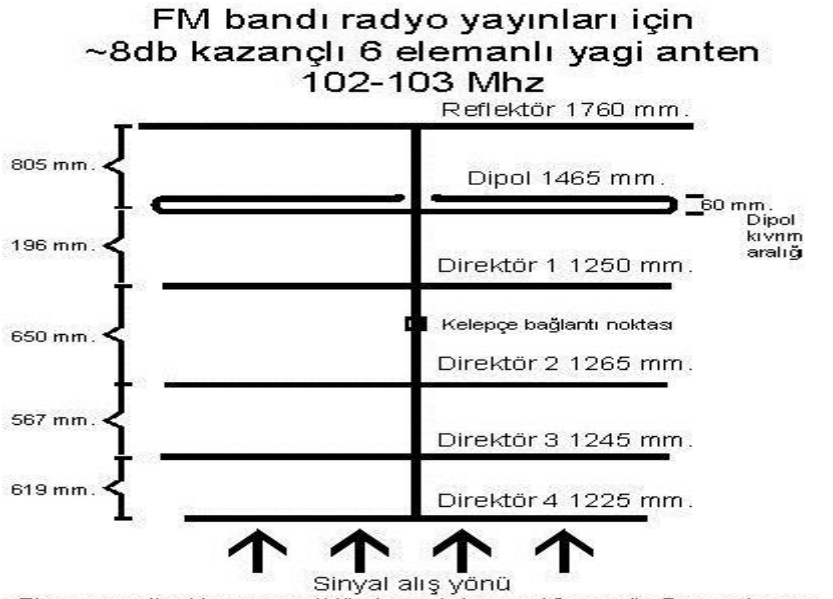




FM Alıcı Antenleri

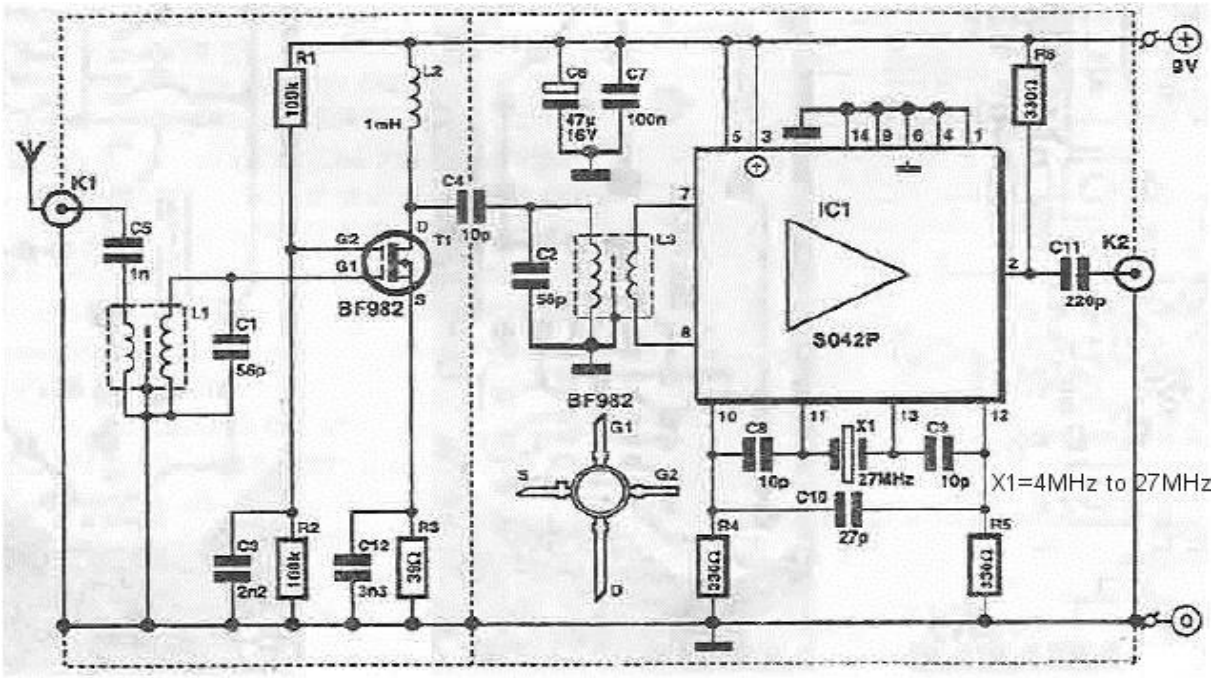


Şekil 1 - Bir λ/2 ışıyıcısının koaksiyal kabloya bağlanması.

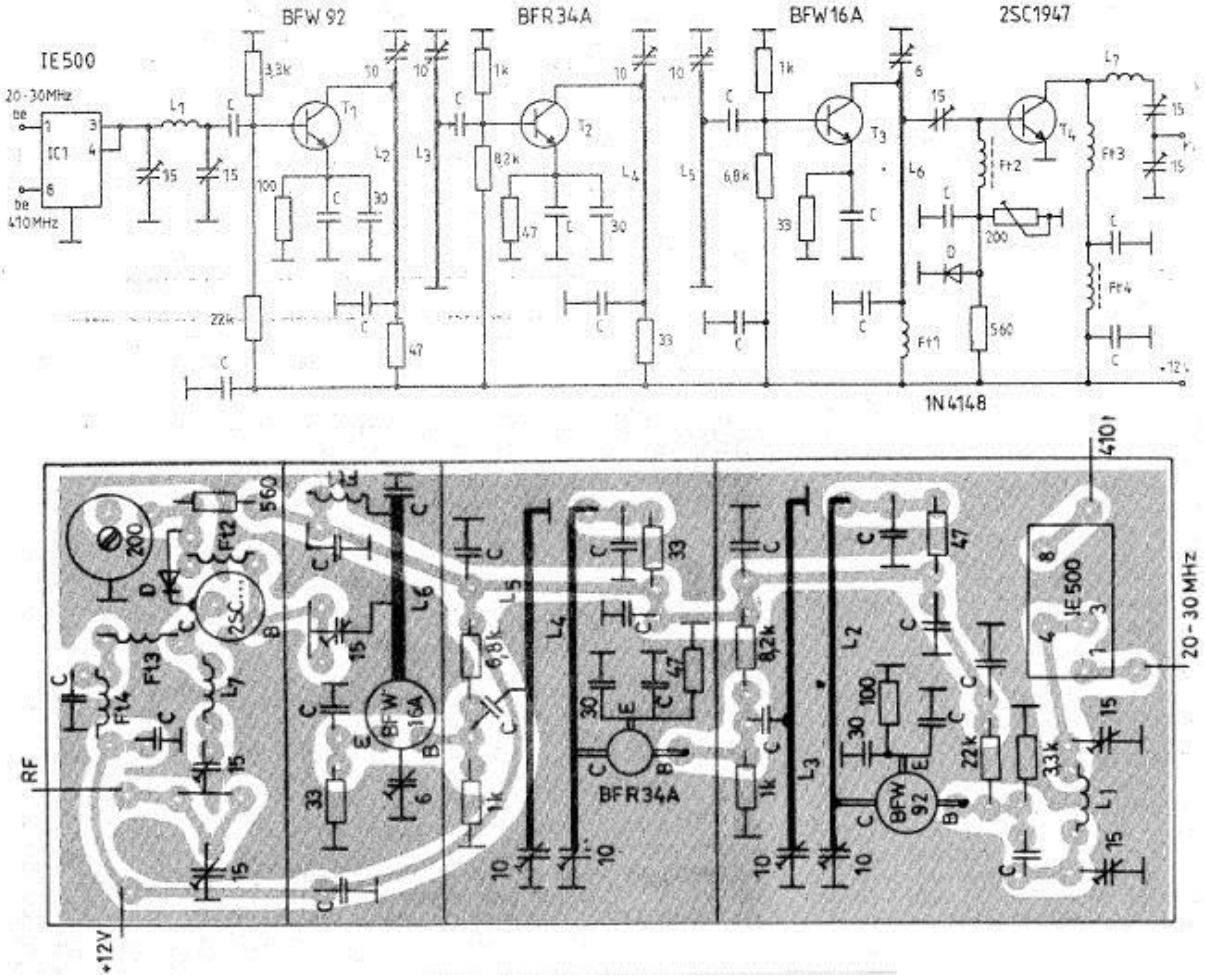


+ Eleman ve dipol boru çapı (Alüminyum) 1 cm = 10 mm dir. Boru uçlarına mantar veya plastikten tapa yapılırsa rüzgarda uğultu yapması önlenmiş olur.
+ Boom, kare kesitli 15x15 veya 20x20 mm alüminyum profil olabilir.
+ Boom boyu ~2900 mm dir.
+ Çatı yüzeyinden ~3.35 m yüksekteki boruya bağlanırsa en randımanlı alış sağlanır.

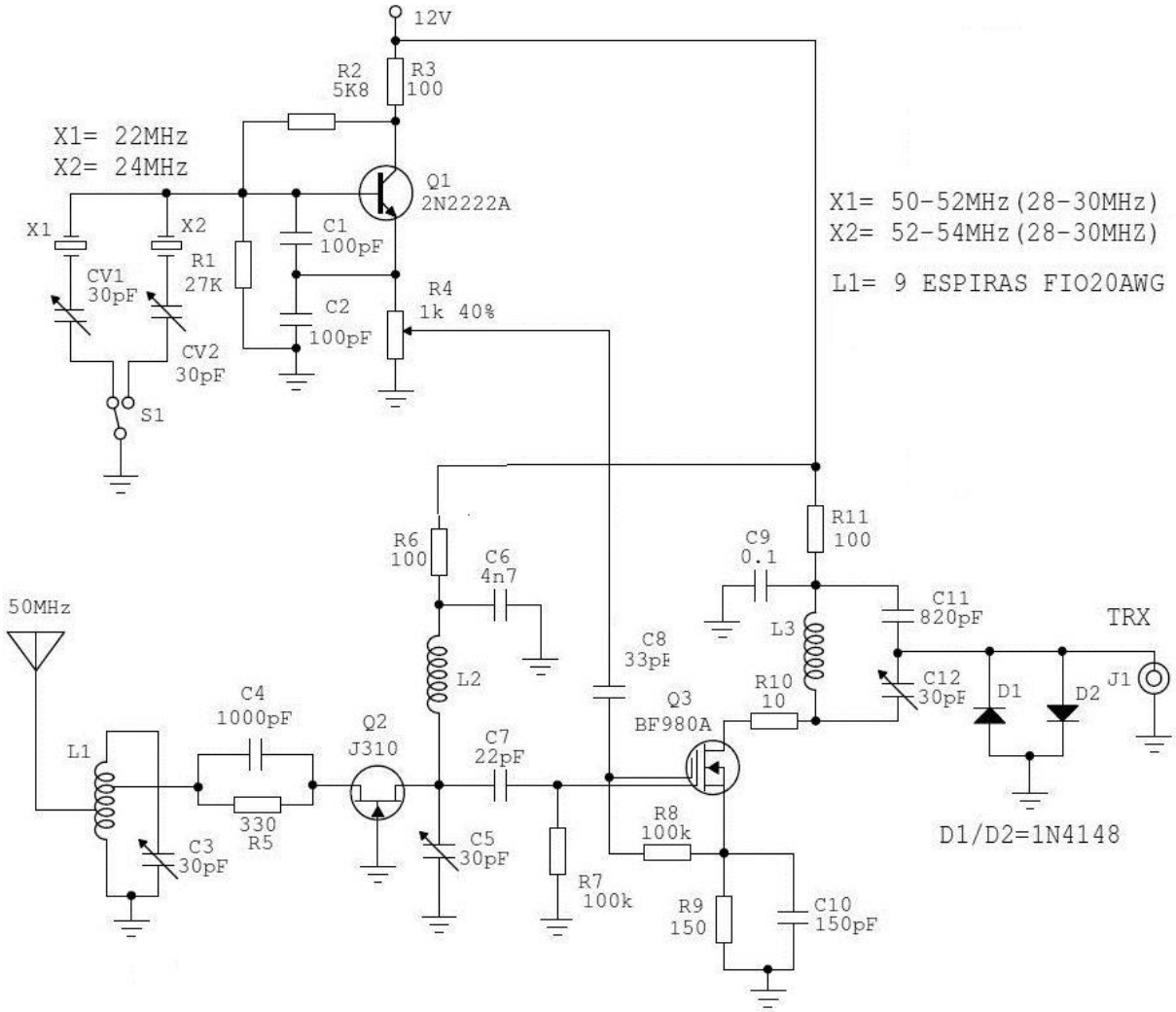
27 Mhz'i Kısa Dalgaya çeviren Konvertör



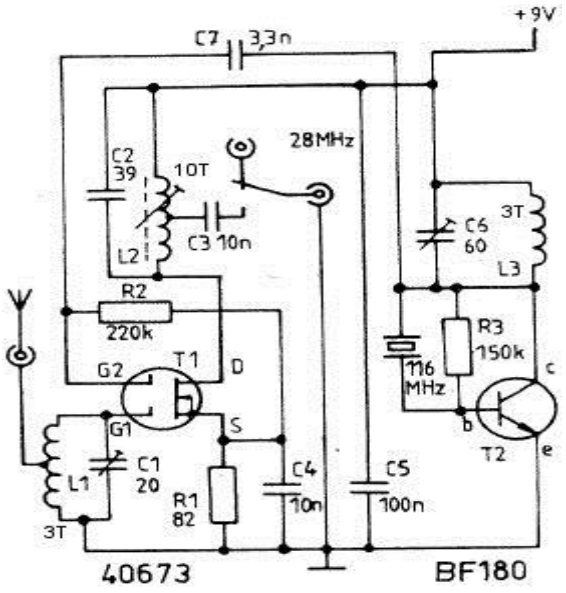
28 Mhz'i 432 Mhz'e çeviren Konvertör



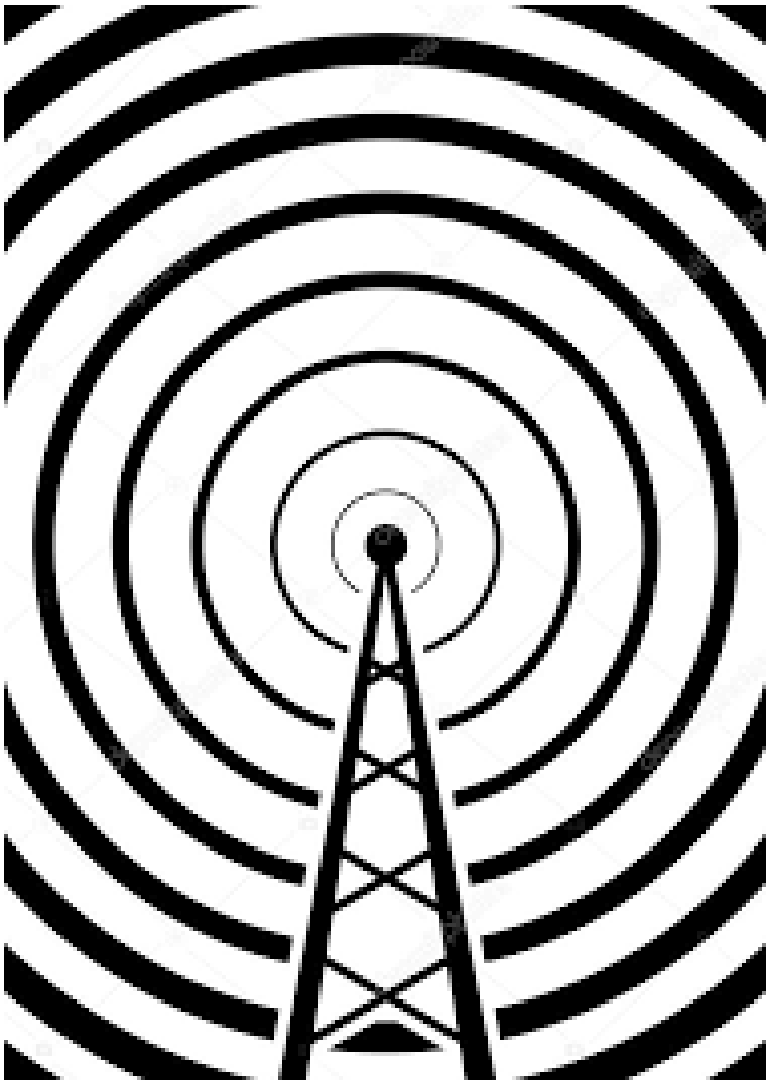
50 Mhz'i 28 Mhz'e çeviren Konvertör



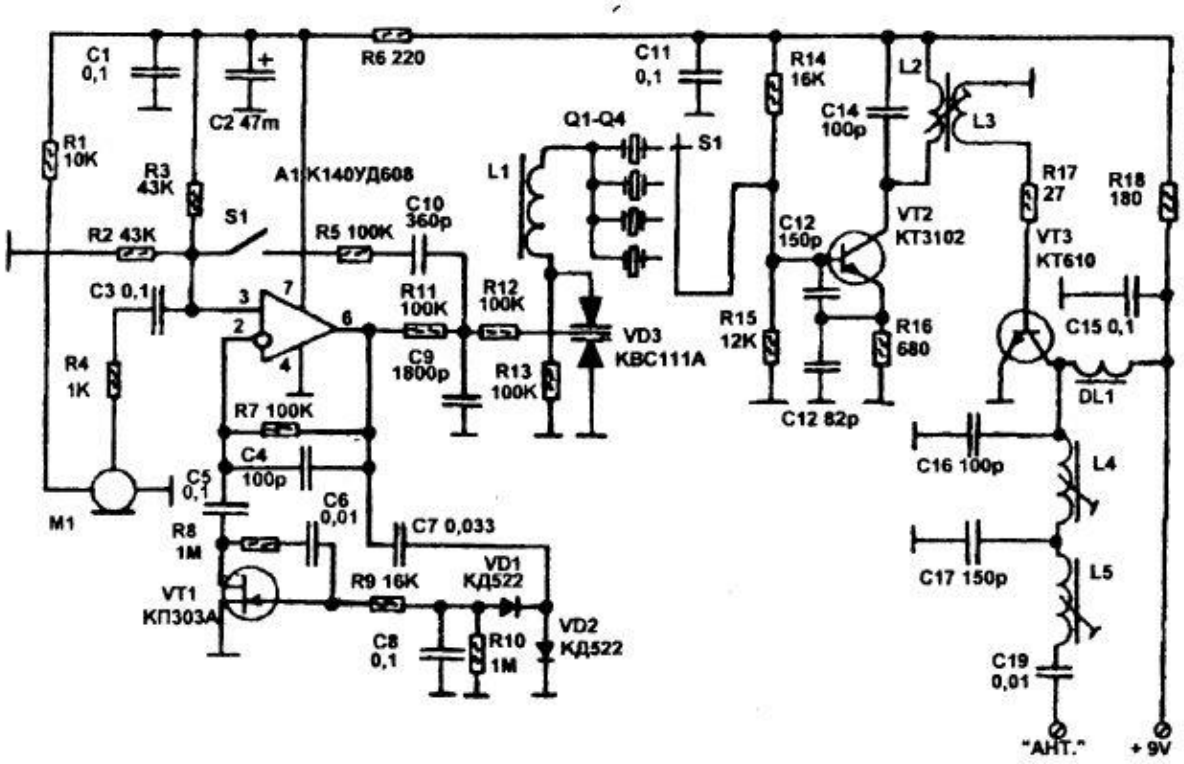
432 Mhz'i 28 Mhz'e çeviren Konvertör



VERİCİLER



27 Mhz 4 Kanal CB Verici



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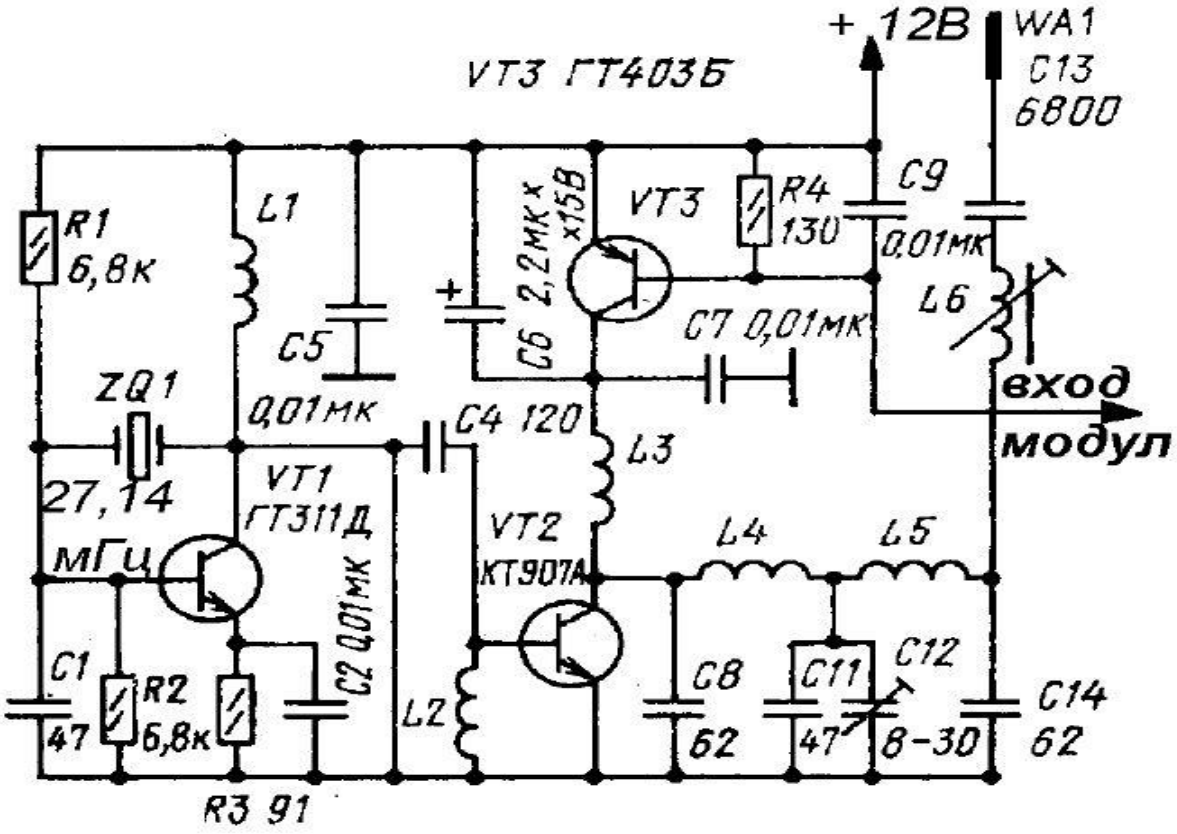

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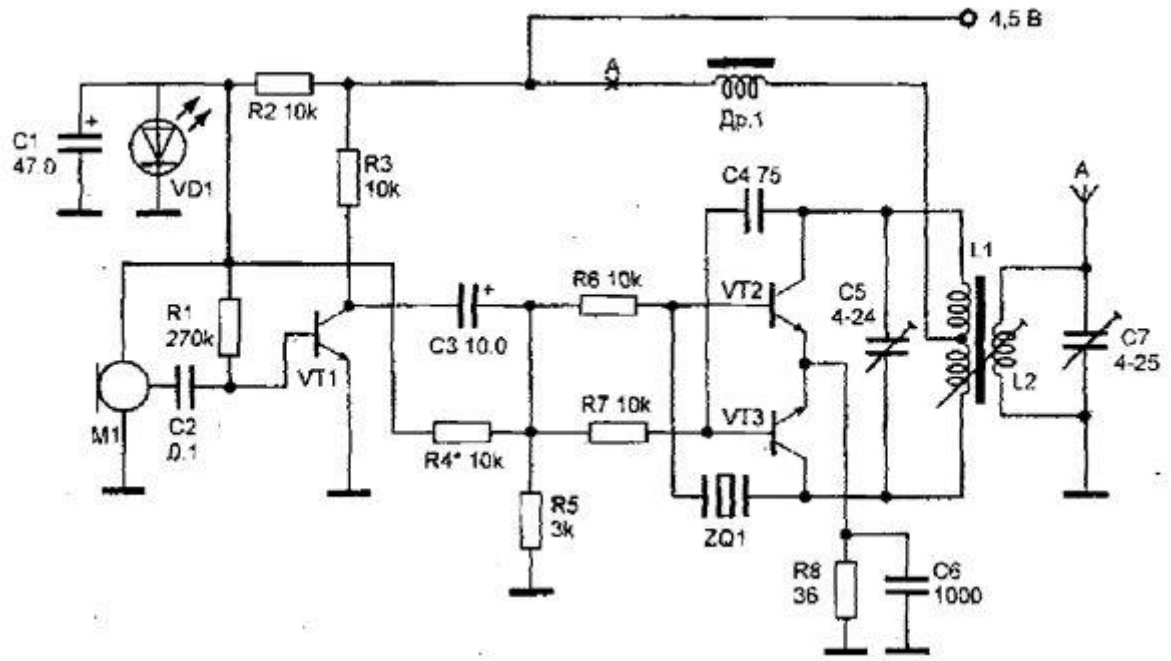

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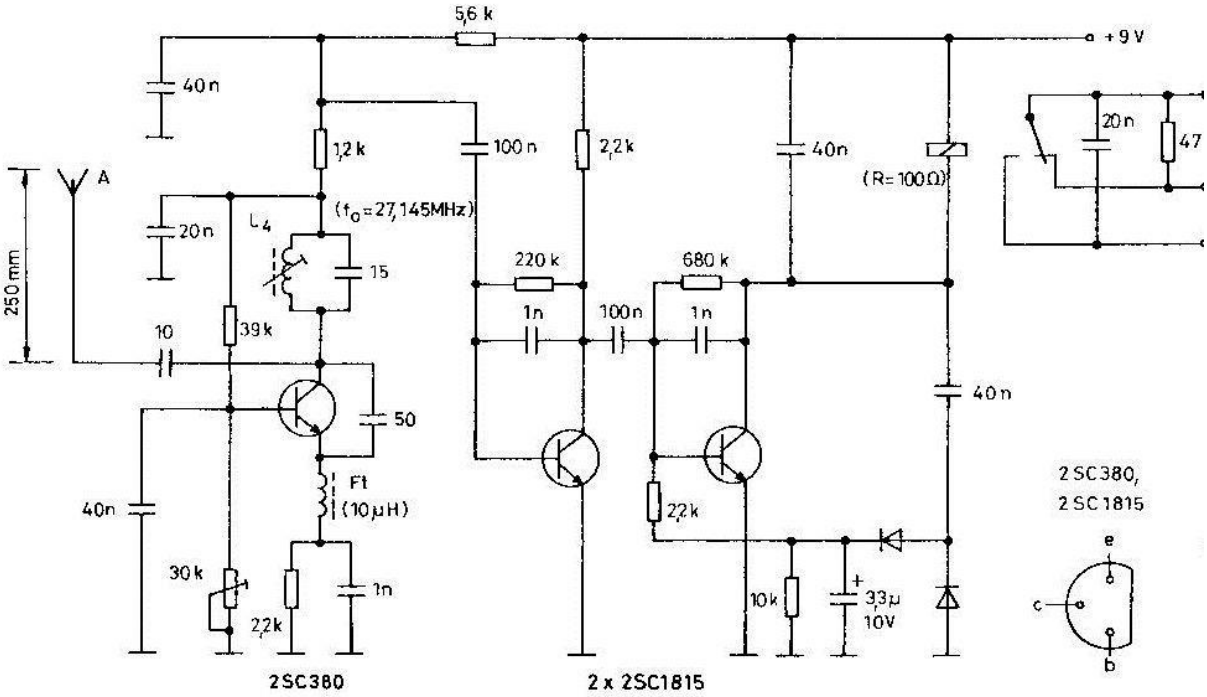
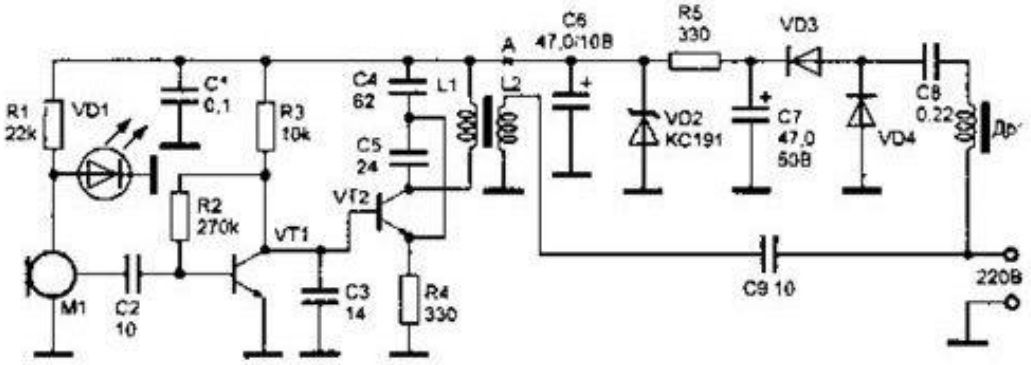
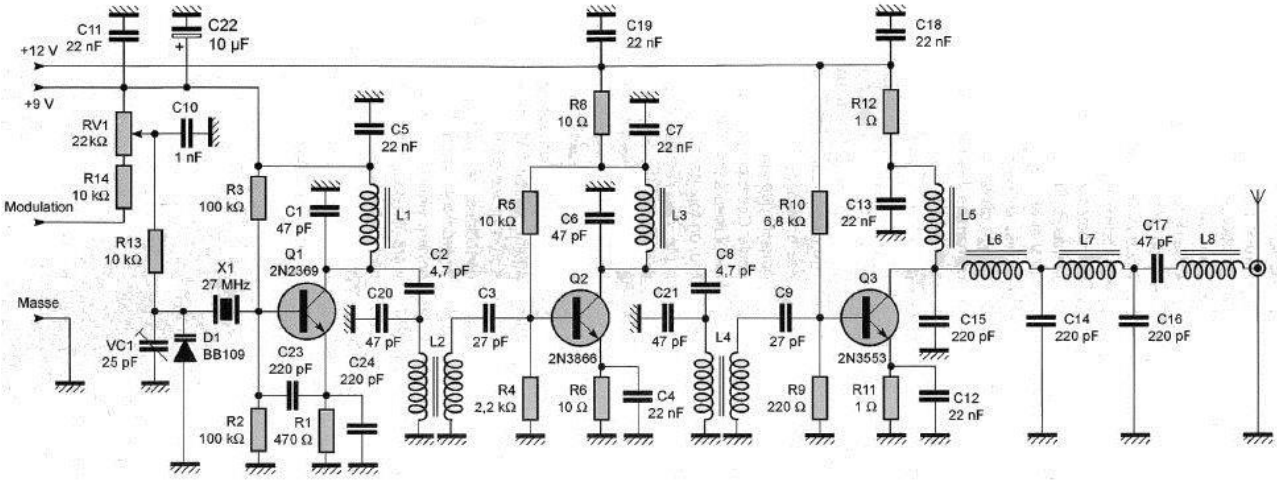


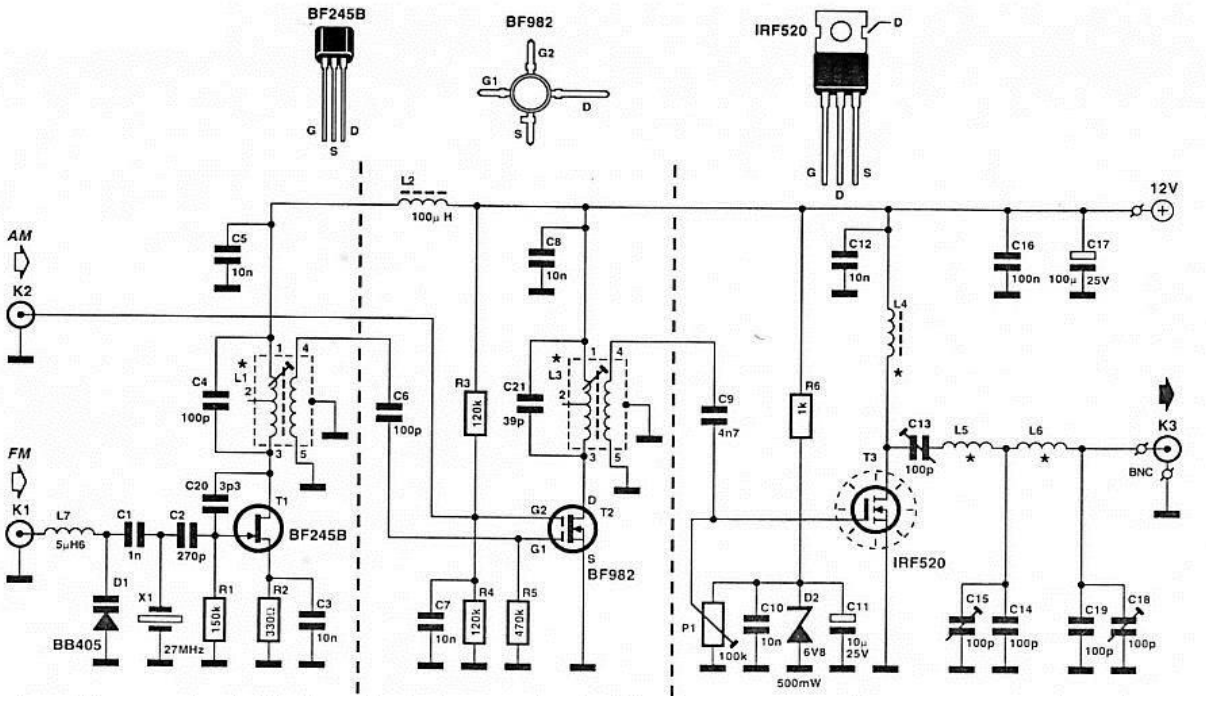
27 Mhz CB Verici



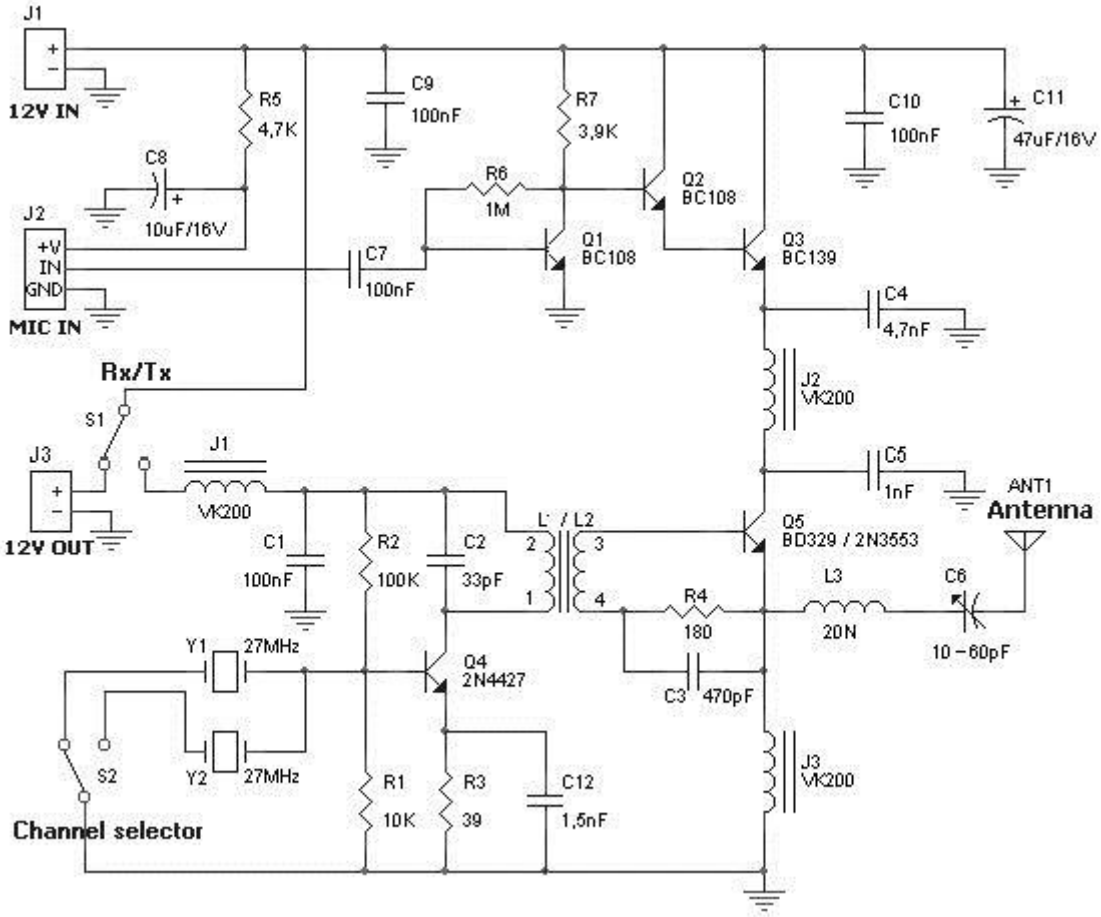
27 Mhz 2 Watt CB Verici



27 Mhz AM/FM CB Verici



27 Mhz 4 Watt CB Verici



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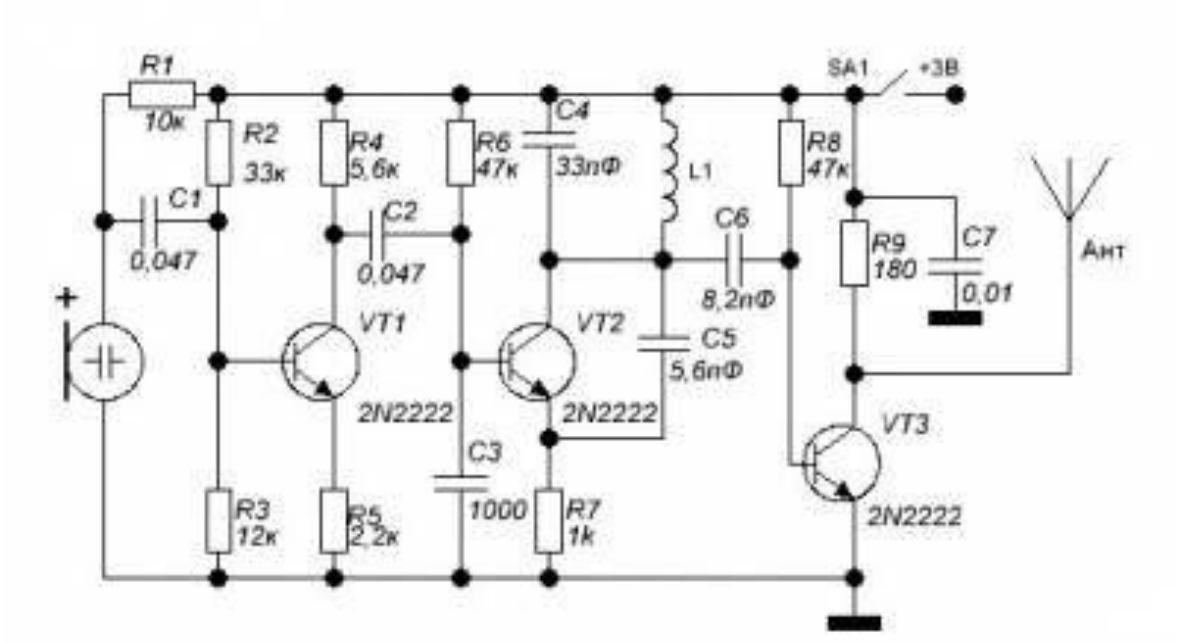
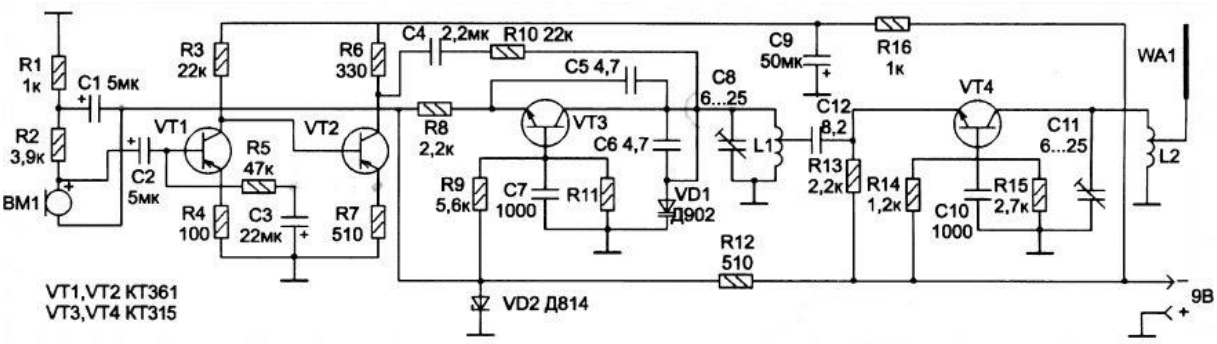


88-108 Mhz FM Verici



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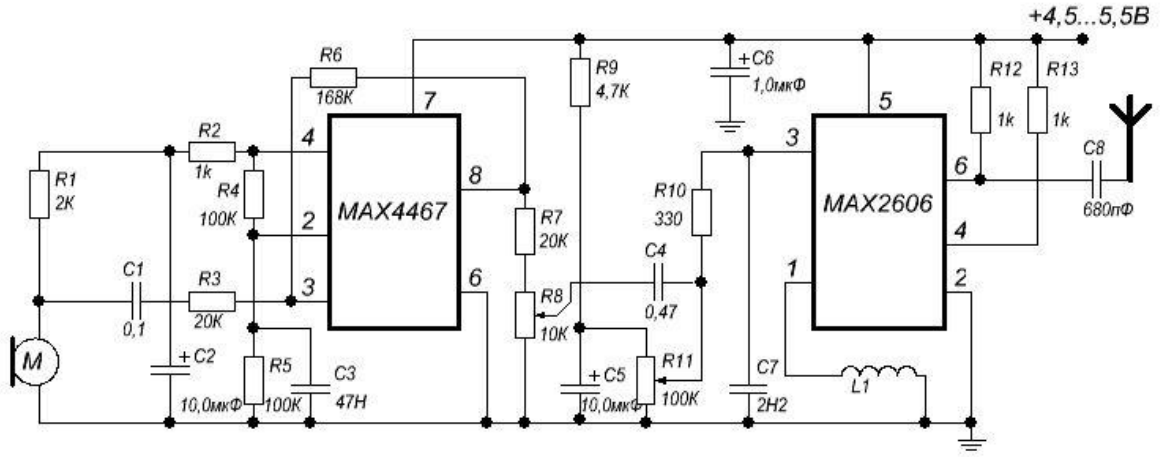
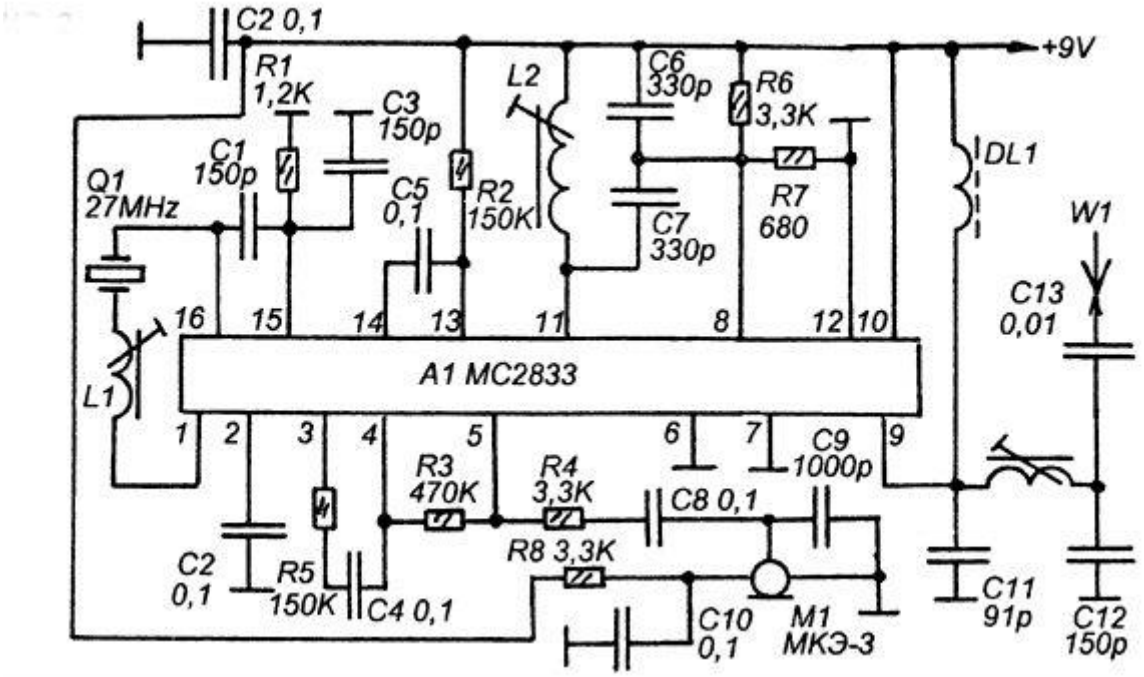
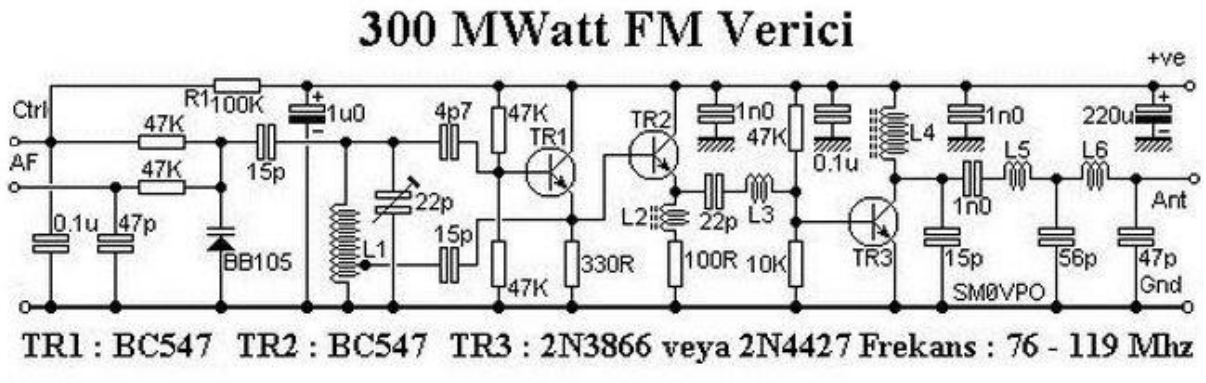


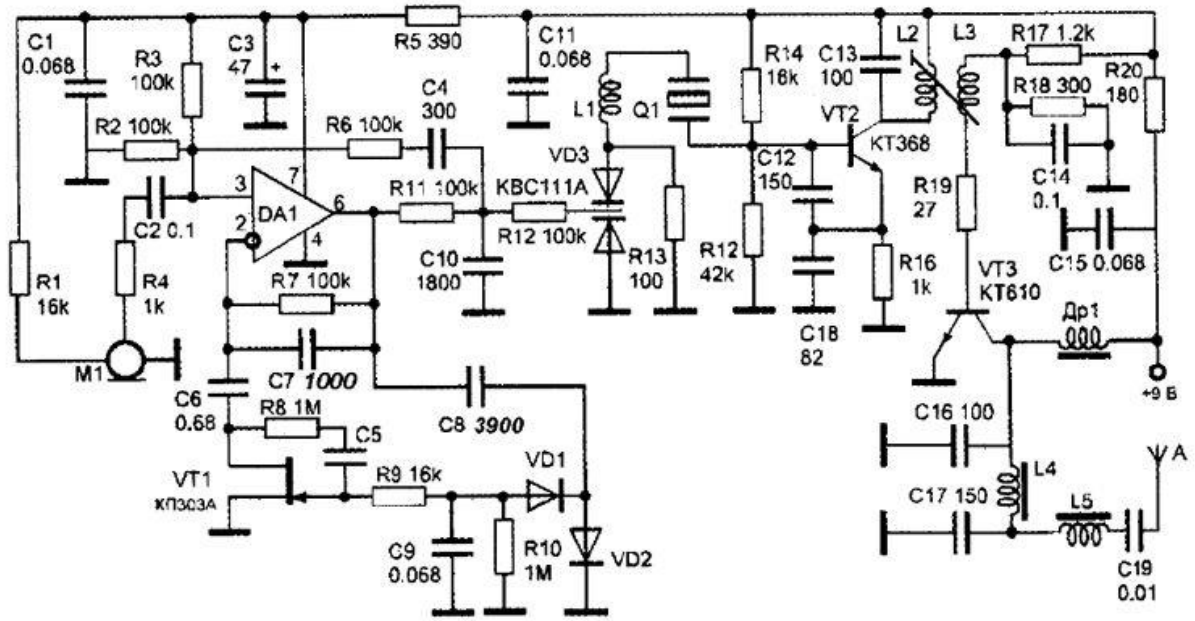
88-108 Mhz FM Verici



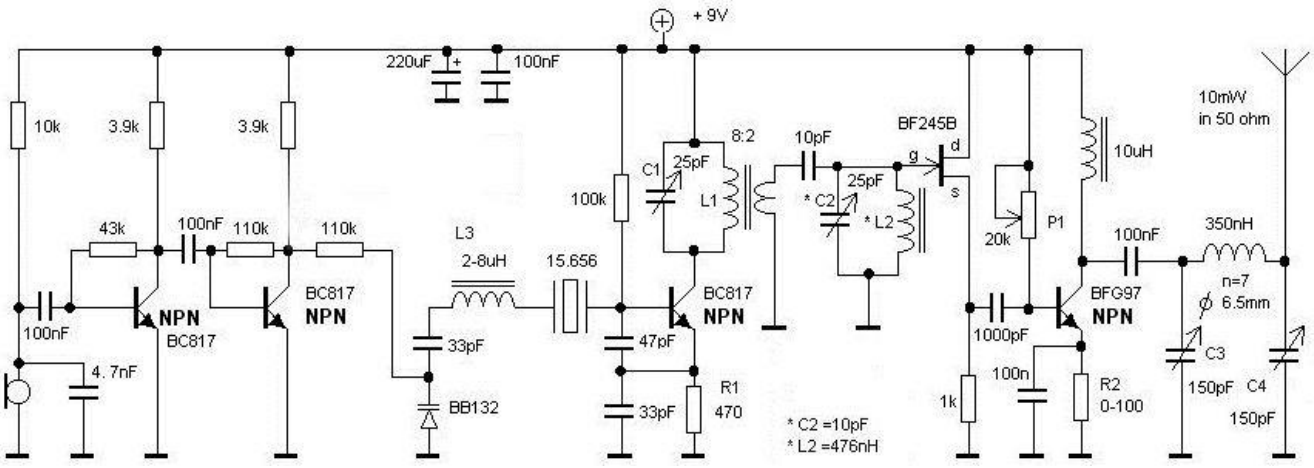
88-108 Mhz 300 mW FM Verici



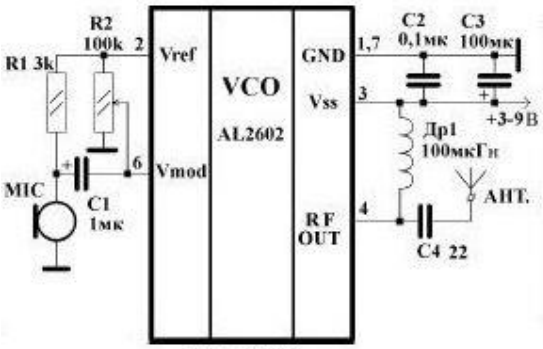
88-108 Mhz FM Verici



88-108 Mhz FM Verici

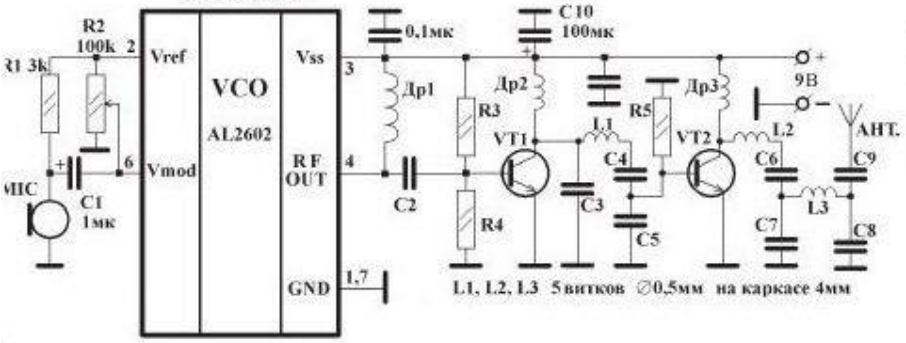


88-108 Mhz FM Verici



Номер вывода	Обозначение	Назначение
1; 7; 8	GND	Минус питания ("земля")
2	Vref	Выход стабилизатора опорного напряжения 3 В
3	Vss	Плюс питания (3 – 9 В)
4	RF OUT	Мощный выход ВЧ (открытый коллектор)
5	OSC Monitor	Слаботочный выход ВЧ (контроль частоты)
6	V mod	Напряжение управления (модулятор, установка частоты)

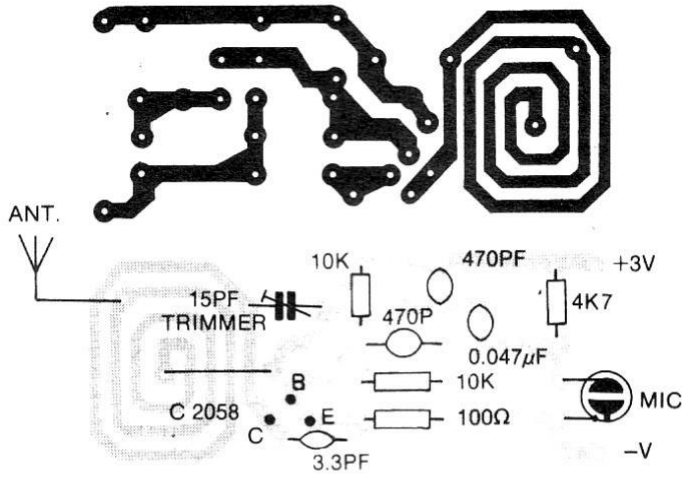
DA1 AL2602



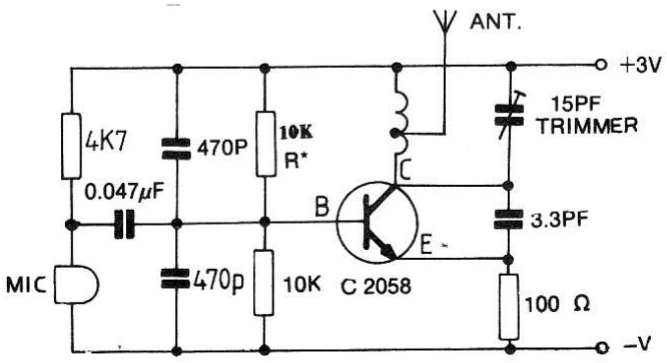
C2 22пФ C6 47пФ
C3 33пФ C7 56пФ
C4 20пФ C8 20пФ
C5 68пФ C9 20пФ

R3 3кОм VT1 BFG591
R4 200 VT2 BLT81
R5 51 Др1-Др3 100мкГн

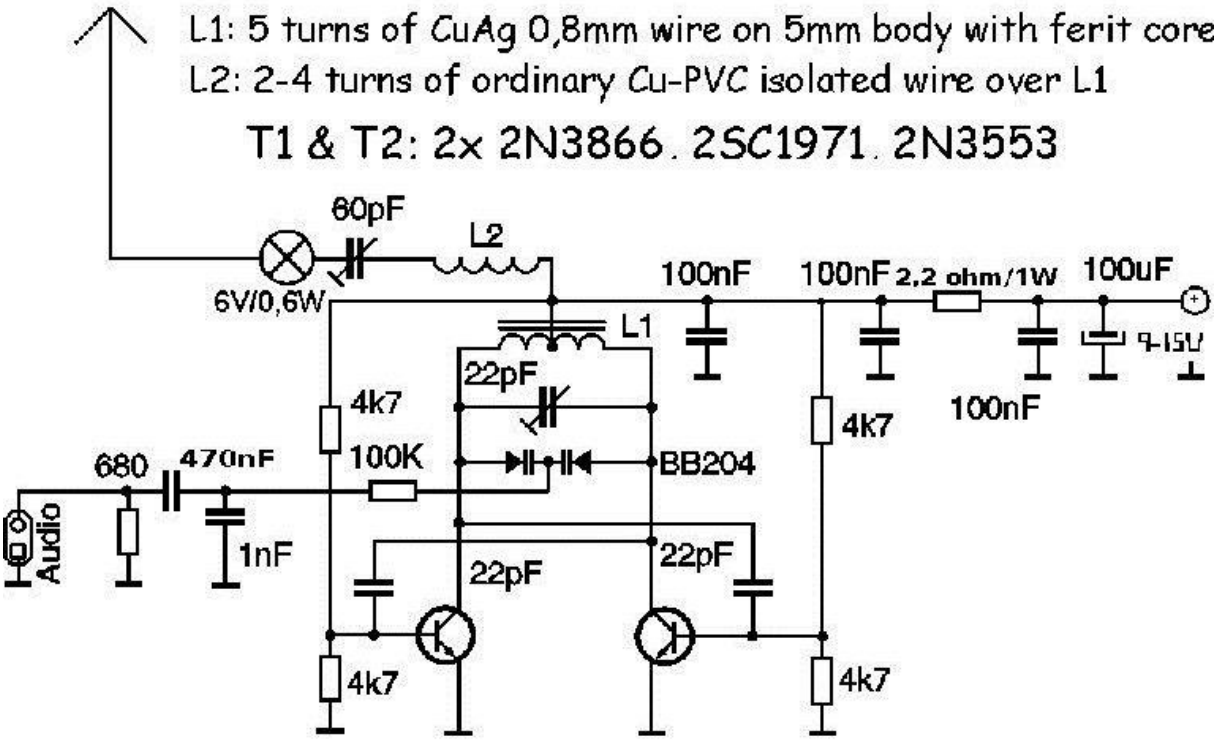
88-108 Mhz FM Verici



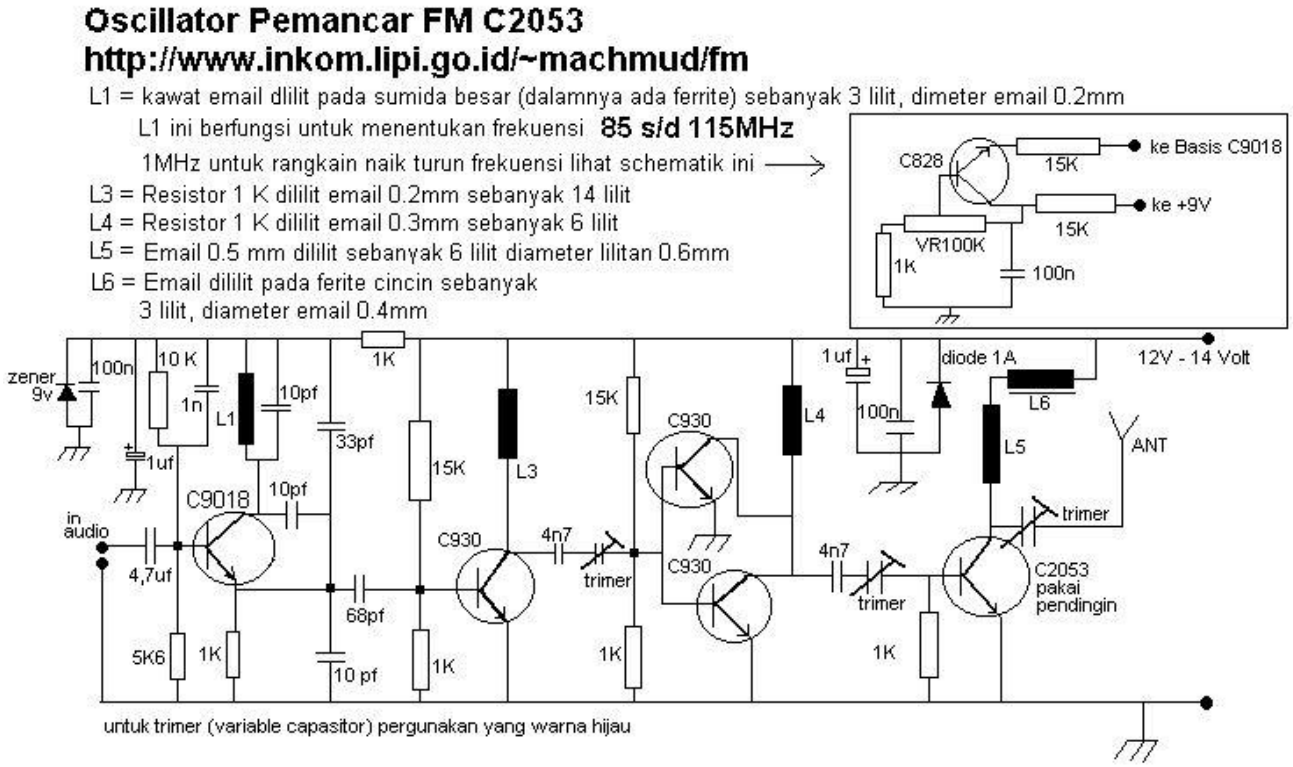
F.M. TRANSMITTER



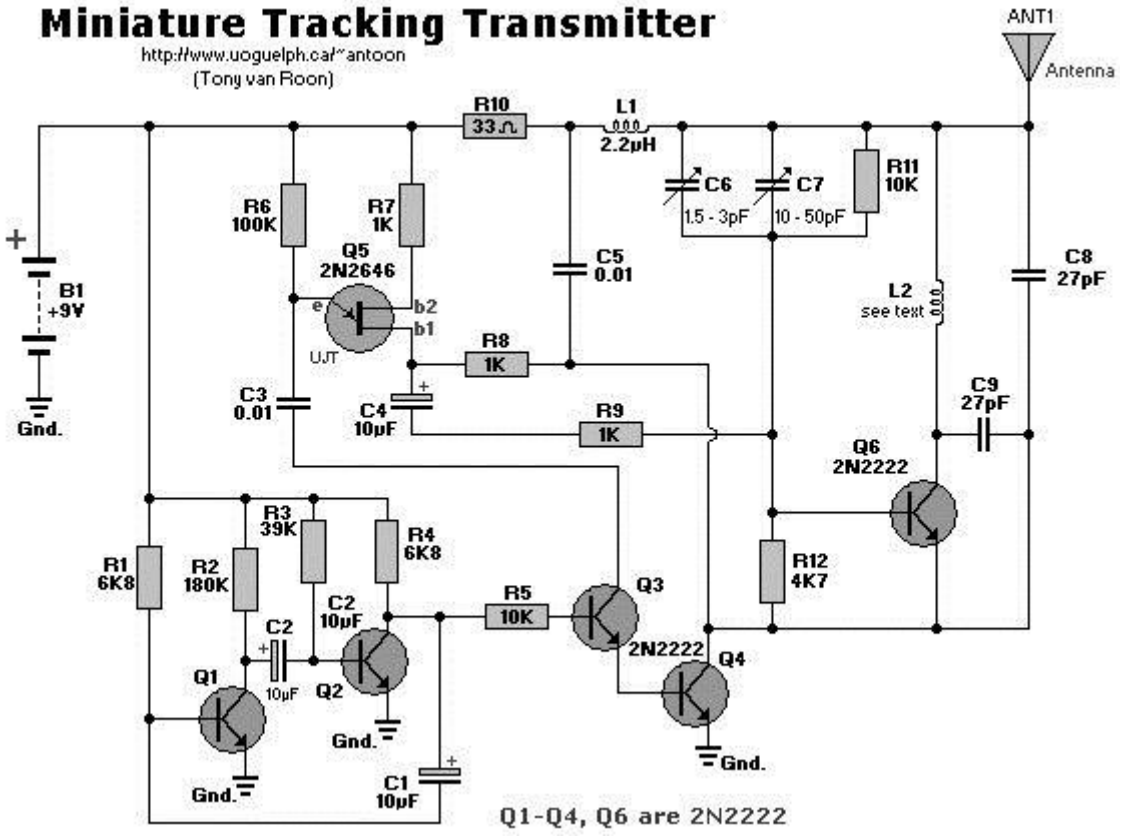
88-108 Mhz FM Verici



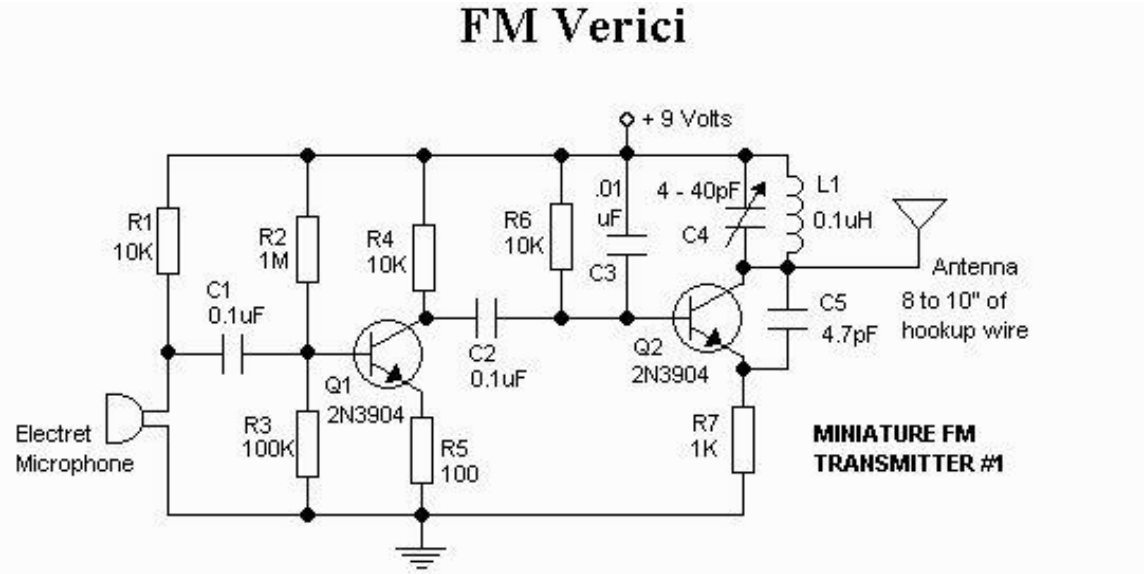
88-108 Mhz FM Verici



88-108 Mhz FM Verici

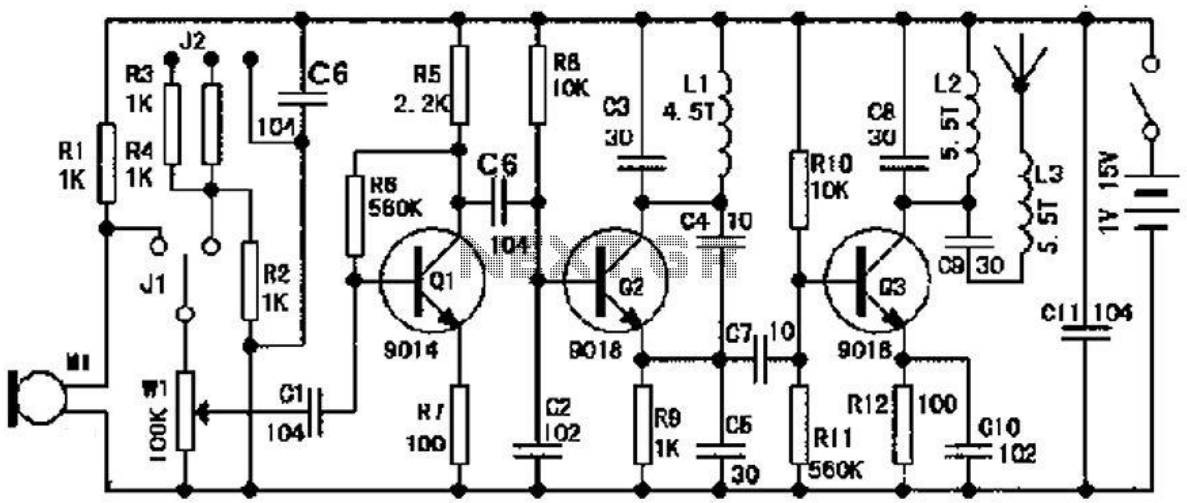


88-108 Mhz FM Verici

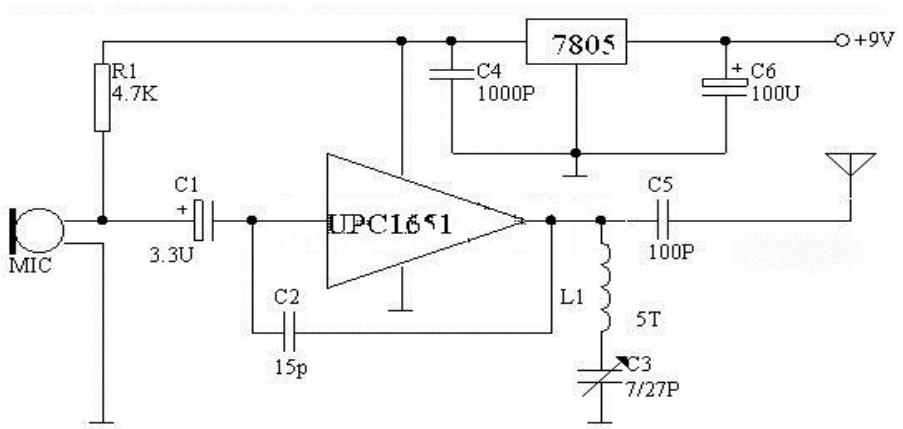


This miniature transmitter is easy to construct and it's transmissions can be picked up on any standard FM receiver. It has a range of up to 1/4 of a mile or more. It is great for room monitoring, baby listening, nature research, etc. L1 is 8 to 10 turns of 22 gauge hookup wire close wound around a non-conductive 1/4 inch diameter form, such as a pencil. C4 is a small, screw-adjustable, trimmer capacitor. Set your FM receiver for a clear, blank space in the lower end of the band. Then, with a non-conductive tool, adjust this capacitor for the clearest reception. A little experimenting and patience may be in order. Most of the parts values are not critical, so you can try adjusting them to see what happens.

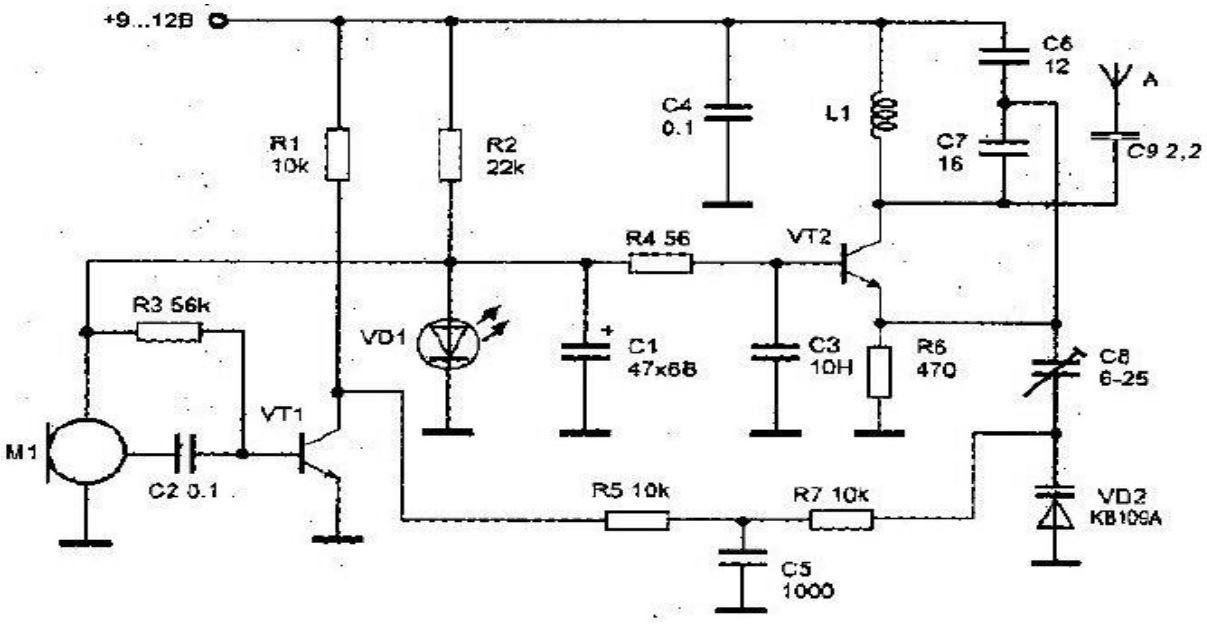
88-108 Mhz FM Verici



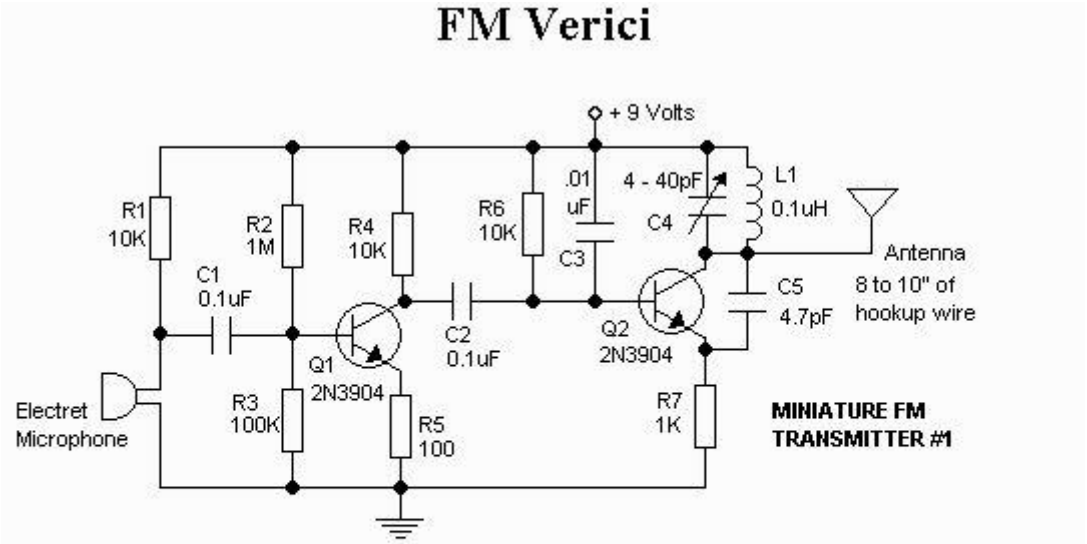
88-108 Mhz FM Verici



88-108 Mhz FM Verici



88-108 Mhz FM Verici



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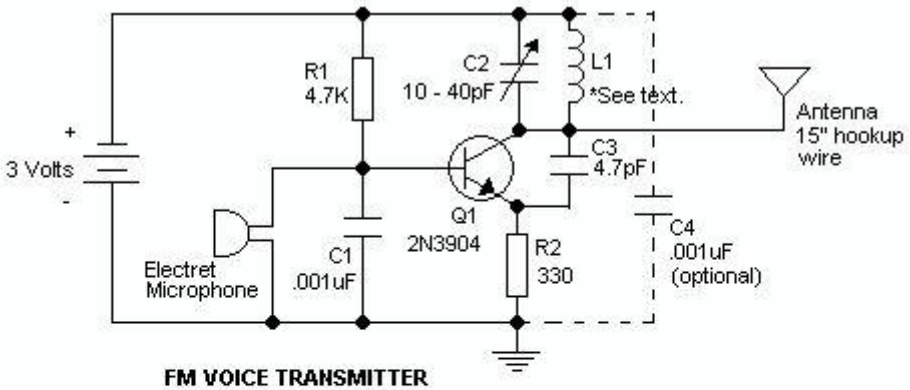
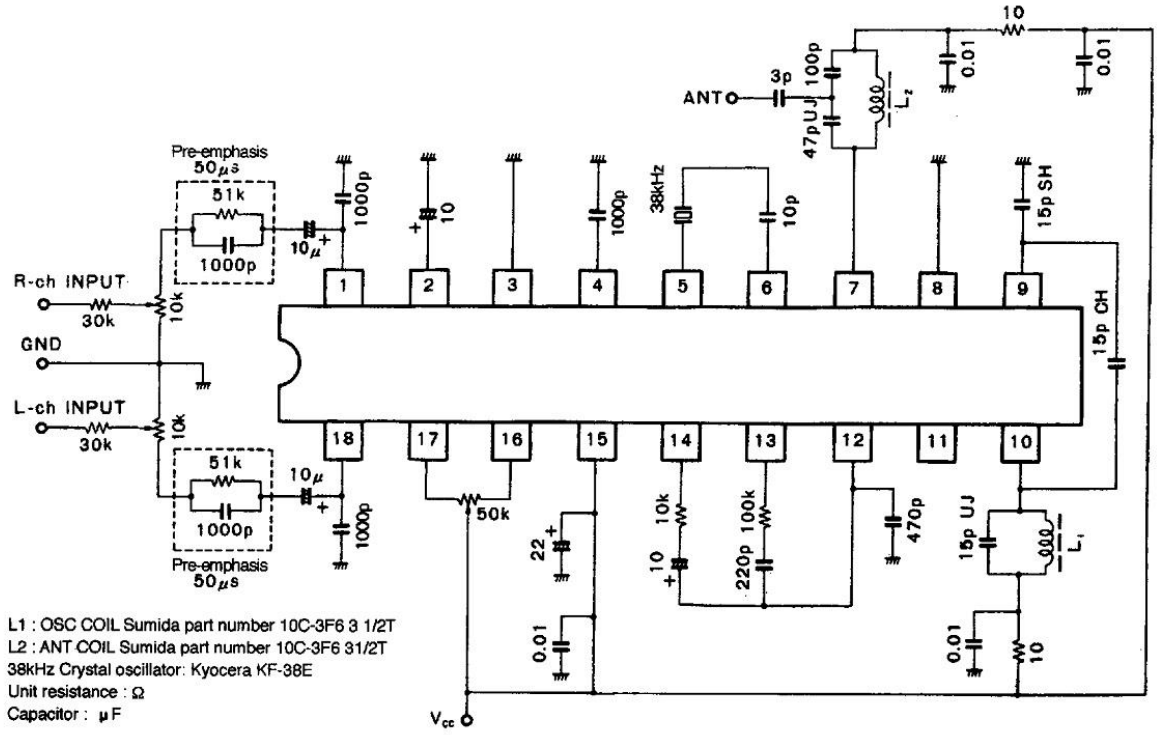
88-108 Mhz FM Verici



FM VOICE TRANSMITTER

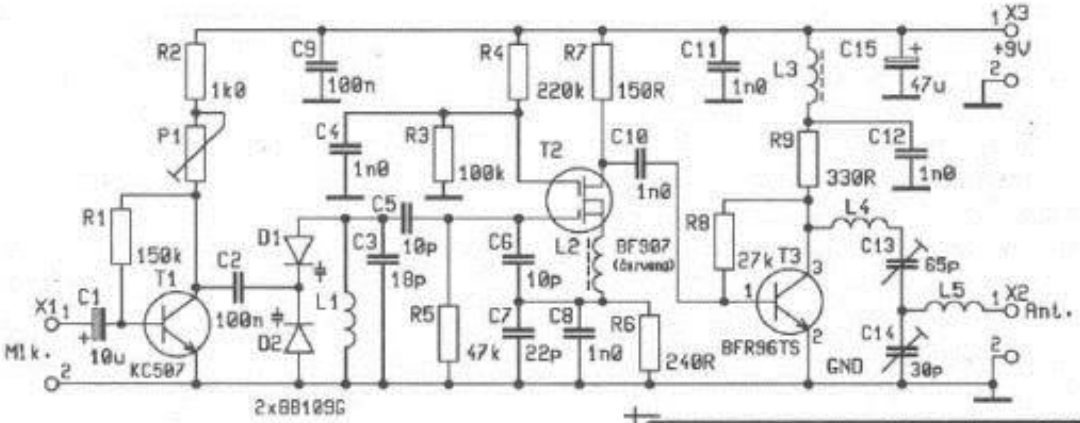
This is another easy-to-build miniature FM transmitter that uses a minimum of parts. Construction is straightforward and non-critical. Although this design uses a 3 volt power source (such as a lithium coin cell), a 9 volt battery can be used, instead, by increasing the value of R1 to 15K and R2 to 1K. C4 is an optional RF bypass capacitor that may help improve performance and increase range. Experiment to find best results. L1 was made by stripping 22 ga. hookup wire of it's insulation, then wrapping it in the grooves of the screw threads of a 1/4 diameter bolt, and then back-screwing the bolt out of the resulting coil. 8 turns were made around the bolt. By wrapping the turns in the threads, a uniform seperation was made between the coil windings.

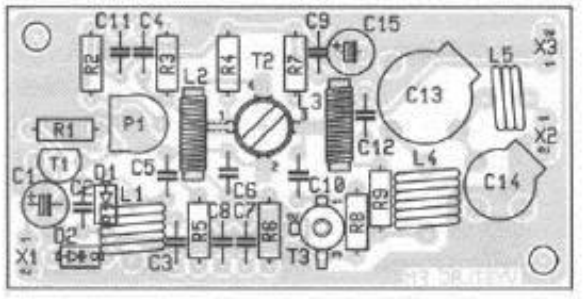
88-108 Mhz FM Verici

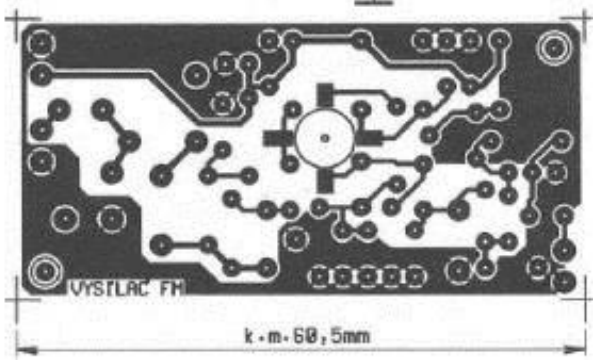


L1 : OSC COIL Sumida part number 10C-3F6 3 1/2T
L2 : ANT COIL Sumida part number 10C-3F6 31/2T
38kHz Crystal oscillator: Kyocera KF-38E
Unit resistance : Ω
Capacitor : μF

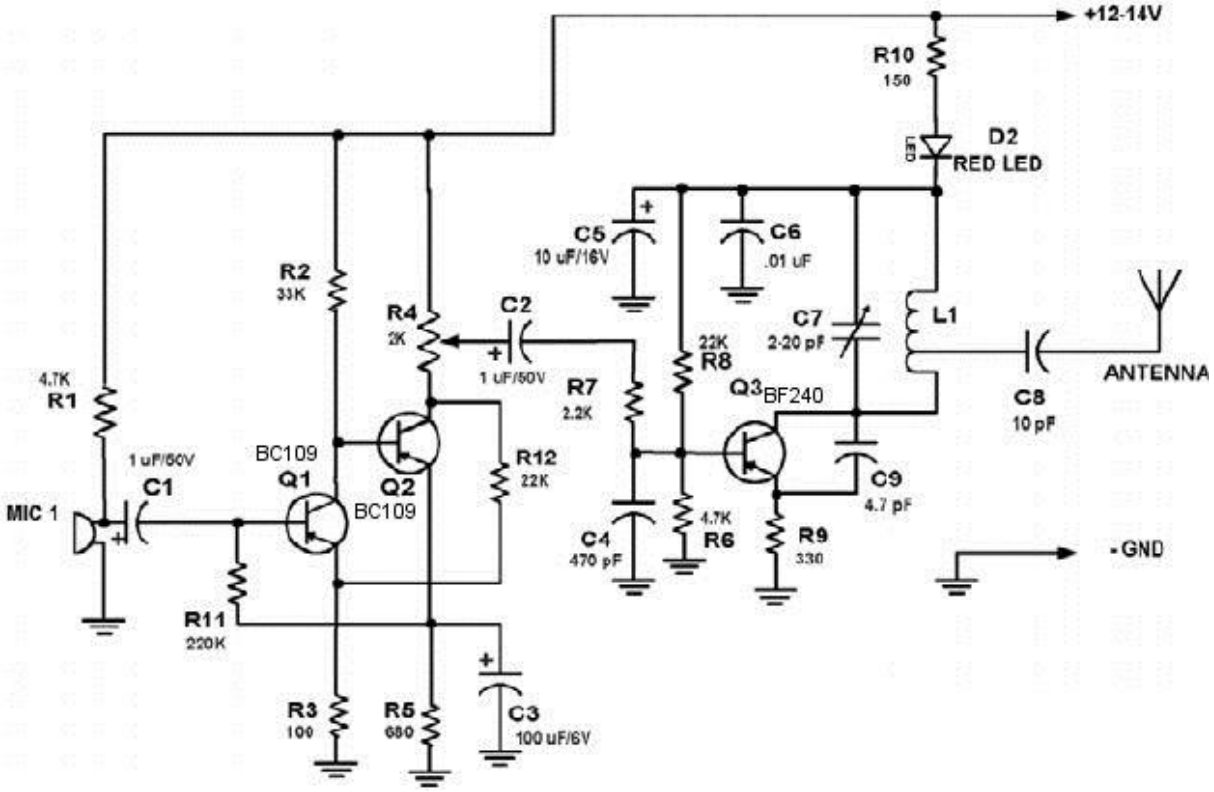
88-108 Mhz 250 mWatt FM Verici



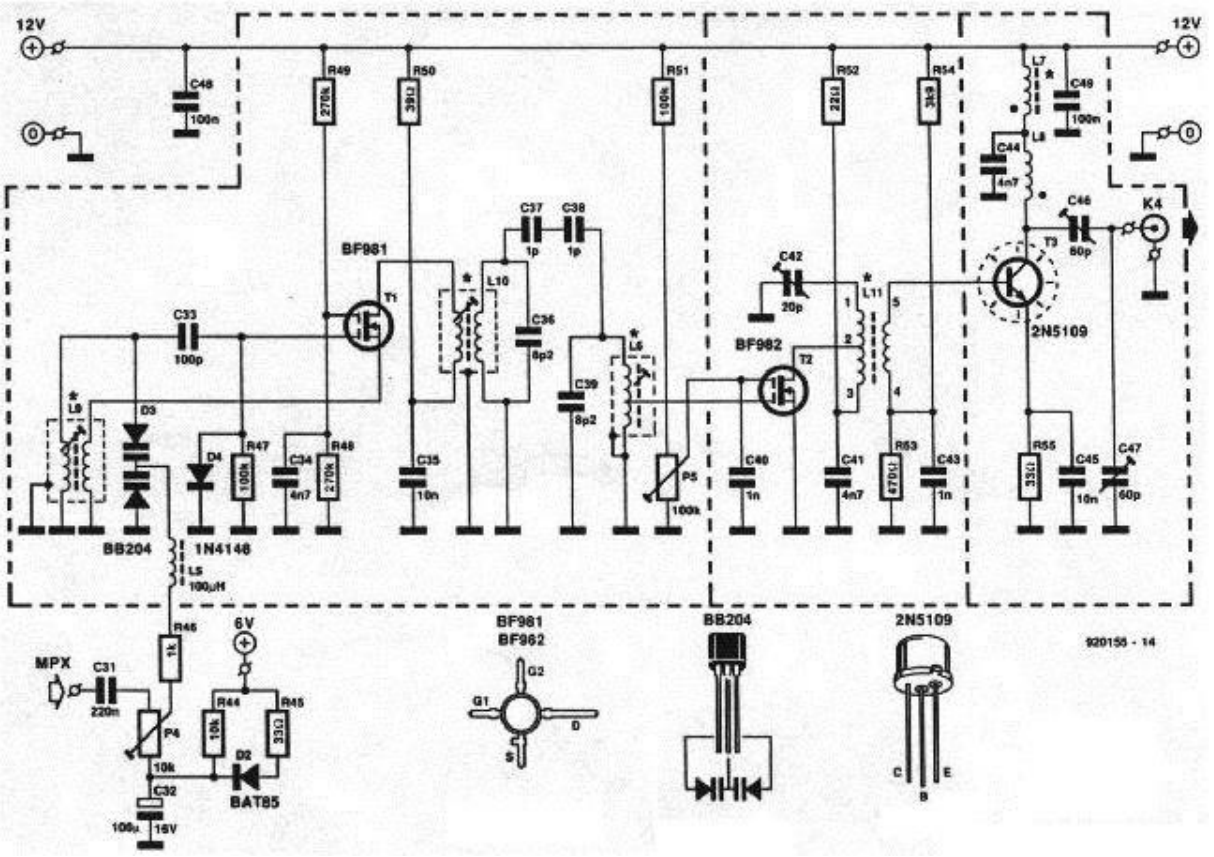




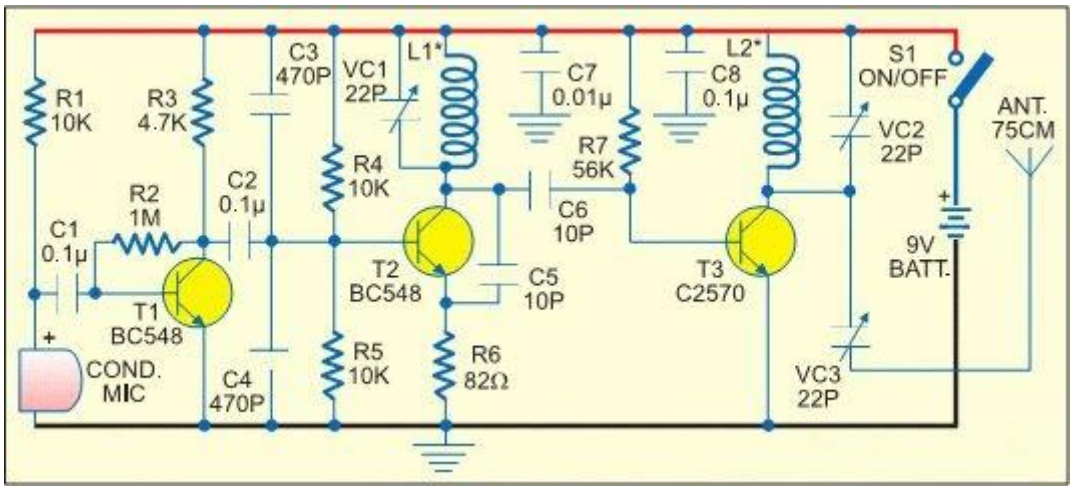
88-108 Mhz 250 mWatt FM Verici



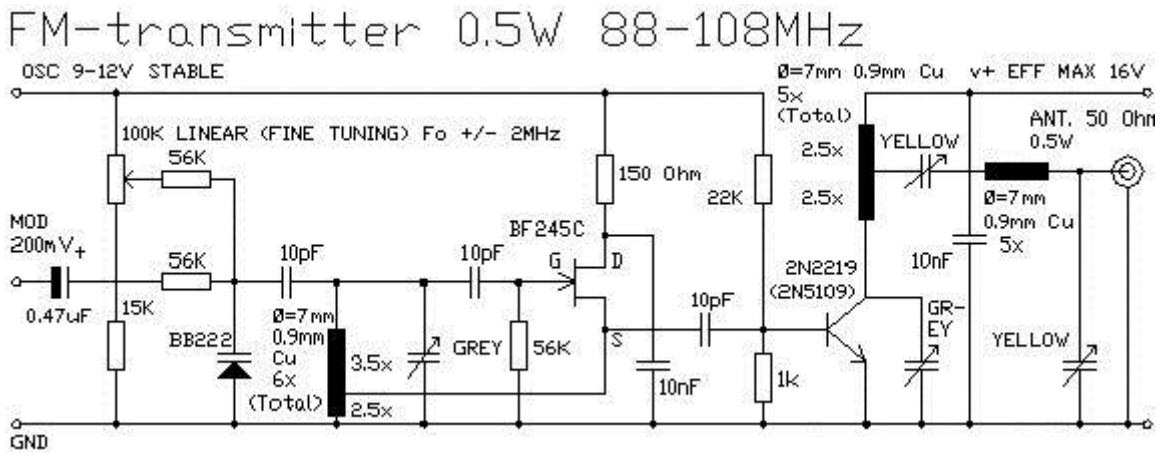
88-108 Mhz 500 mWatt FM Verici



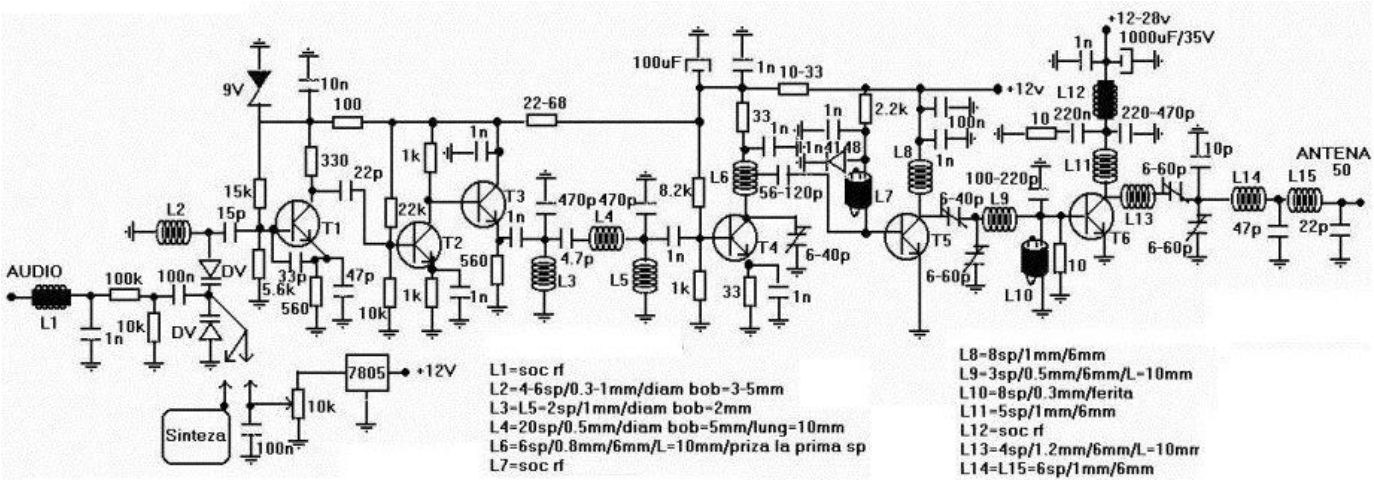
88-108 Mhz 250 mWatt FM Verici



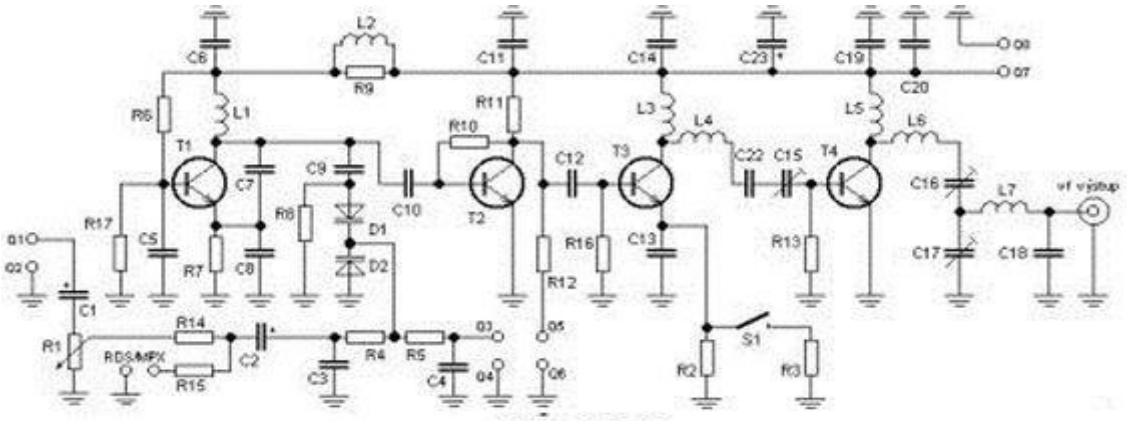
88-108 Mhz 500 mWatt FM Verici



88-108 Mhz 20 Watt FM Verici



88-108 Mhz 1 Watt FM Verici



R1 - pot. 5 k
R2, R12 - 1 k
R3 - 220
R4, R8, R10 - 27 k
R5, R6, R14, R17 - 10 k
R7, R16 - 470
R9 - 100
R11 - 270
R13 - 10
R15 - 22 k

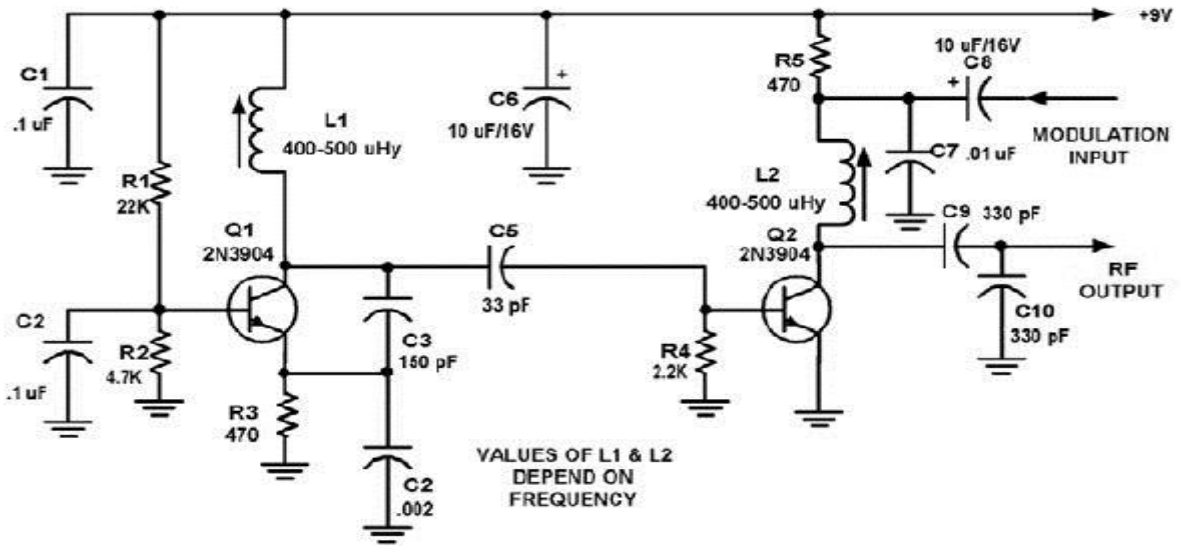
C1 - 4,7 uF
C2 - 1 uF
C3, C4, C12 - 100 pF
C6, C9, C11, C13, C14, C19, C22 - 1 nF
C7, C8 - 10 pF
C10 - 8.2 pF
C18 - 22 pF
C15 - trimmer 47 pF
C16, C17 - trimmer 60 pF
C20, C5 - 100 nF mini
C23 - 470 uF

(All coils are free-standing air-core types, wound of 0,7 mm Cu wire, 6 mm

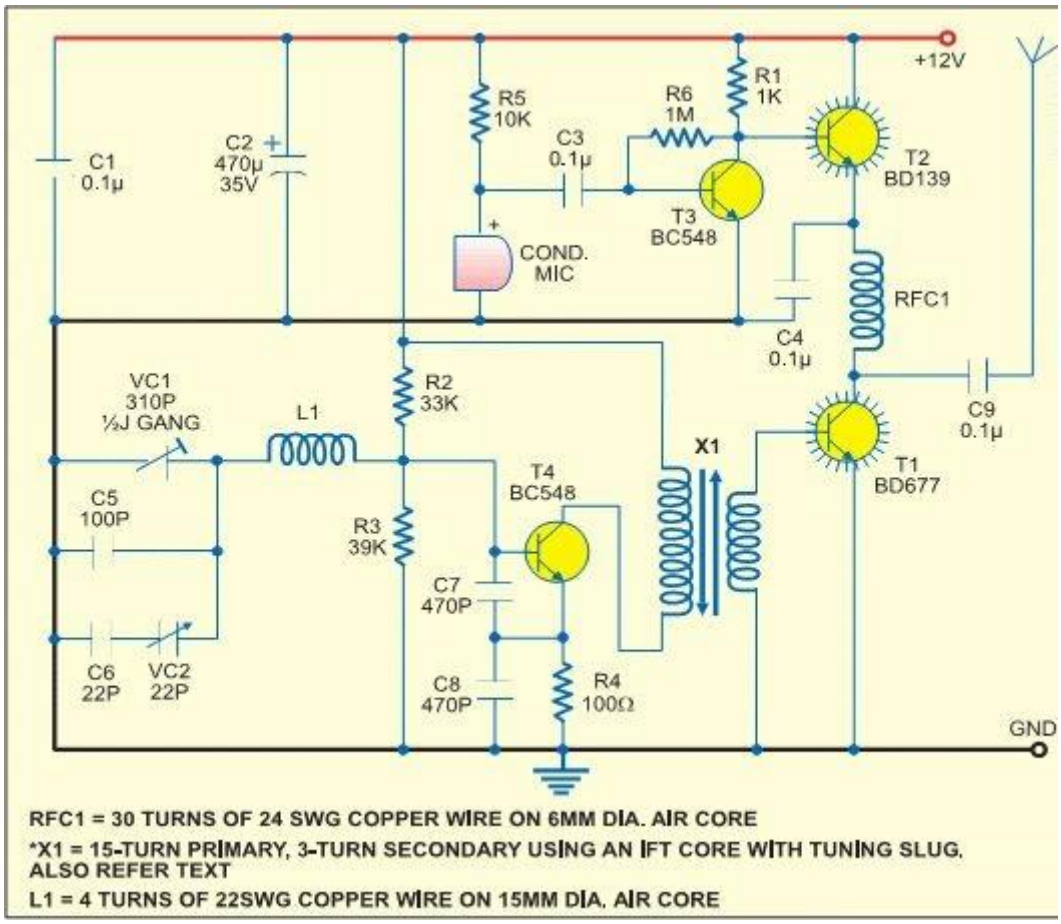
L1 - 4,5 coils
L3 - 2,5 coils
L4 - 1,5 coils
L2 - 6,5 coils around R9 resistor
L5 - 9,5 coils
L6 - 5,5 coils
L7 - 3,5 coils

Transistors:
T1 - BC547C (BC548C, BC547B)
T2 - BFR91A (BFR96)
T3 - BFR96
T4 - 2SC1971
Diodes:
D1, D2 - BB109G, BBY31 or BB409

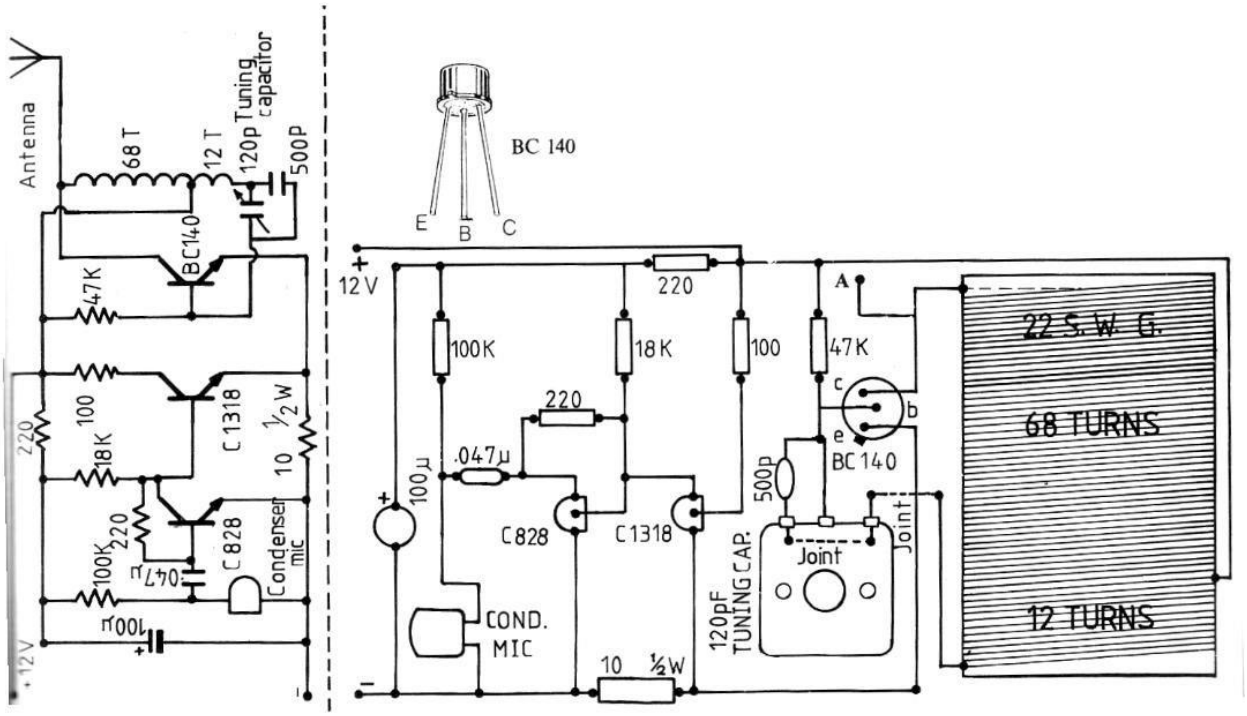
AM Orta Dalga Verici



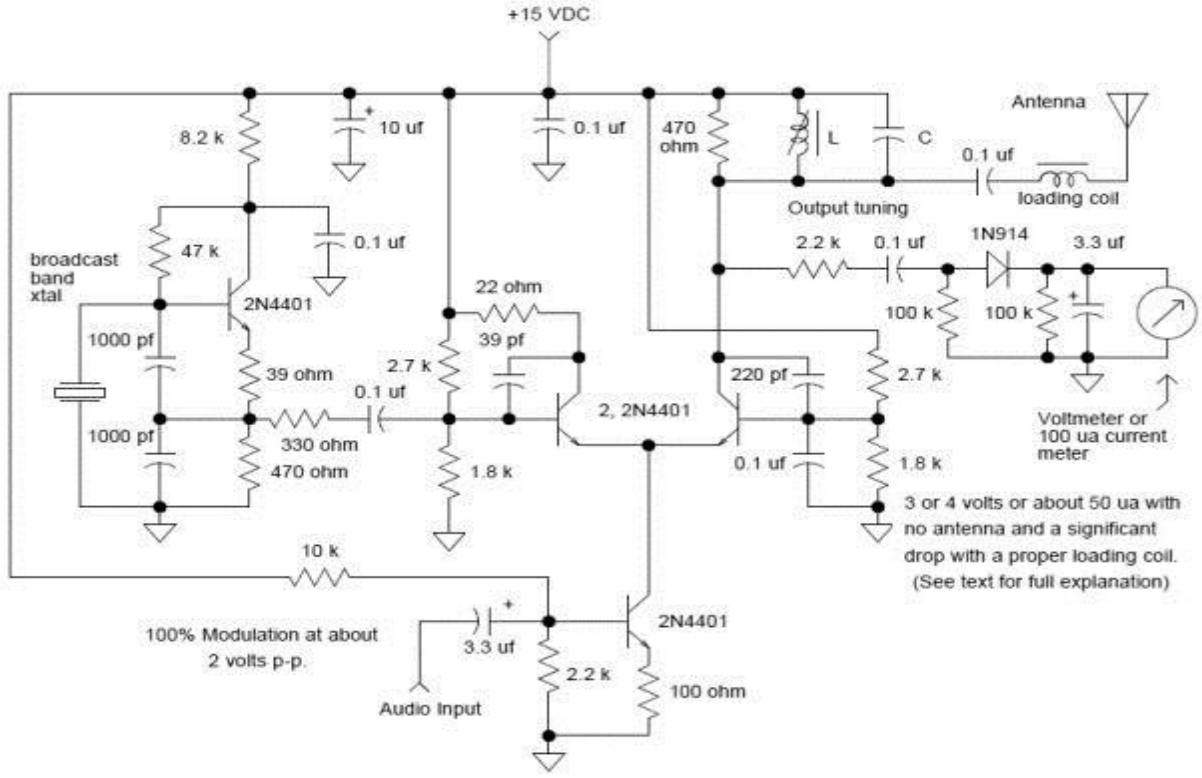
AM Kısa Dalga Verici



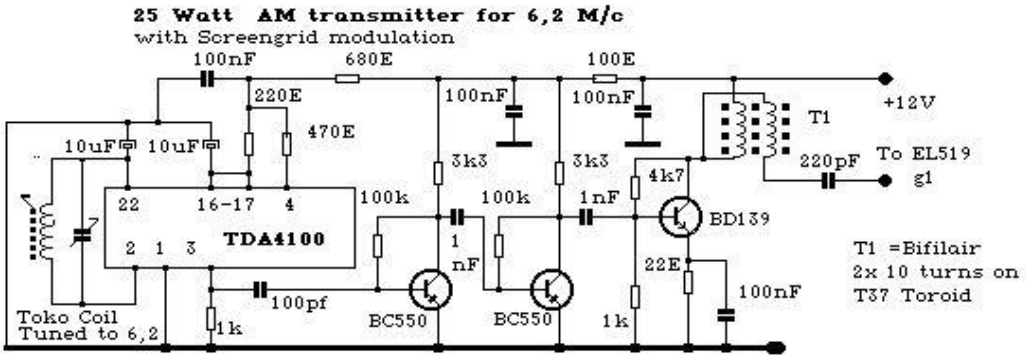
AM Kısa Dalga Verici

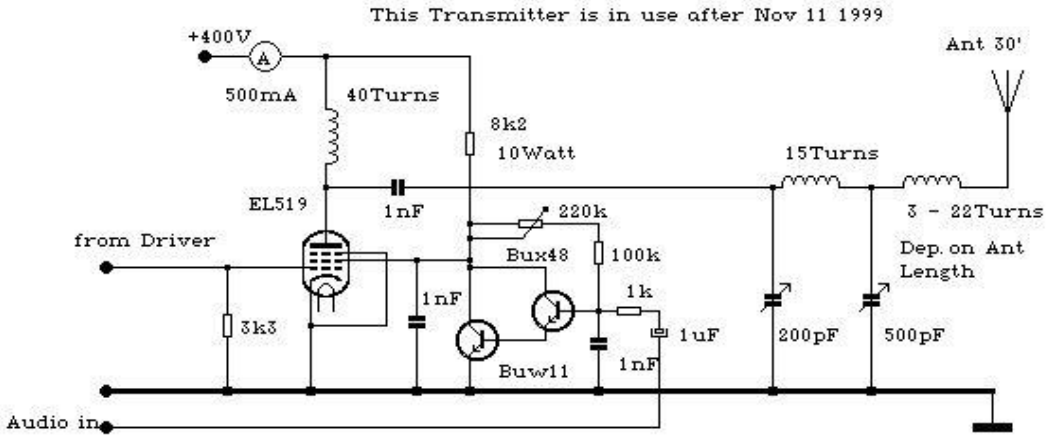


AM Kısa Dalga Verici

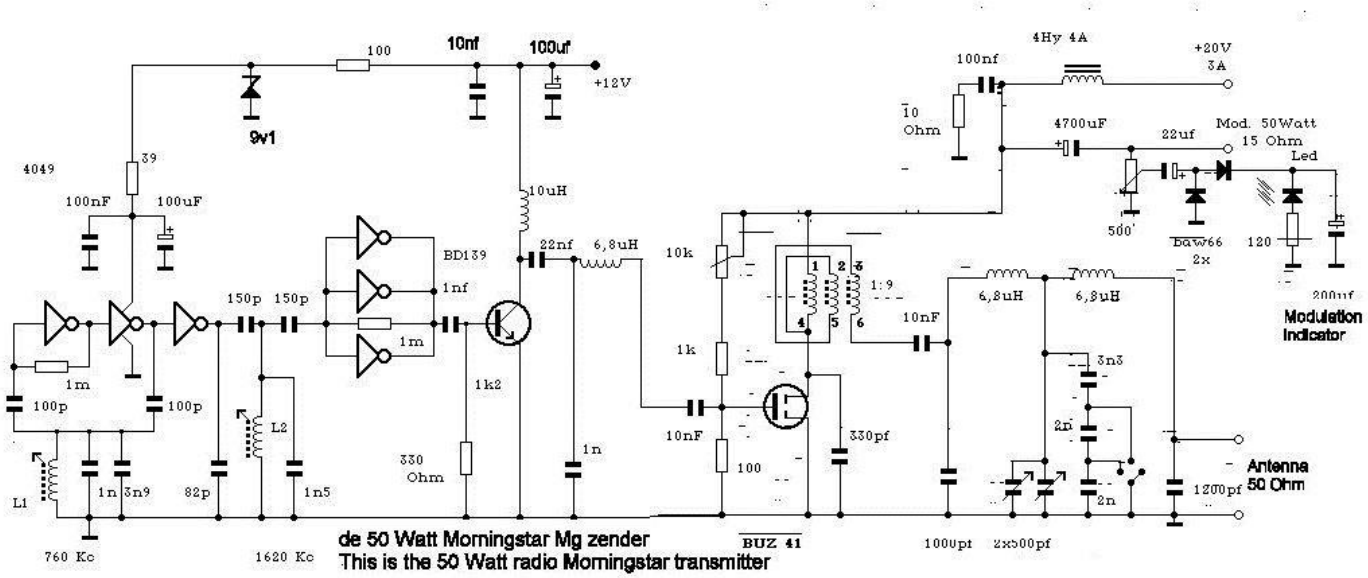


AM Kısa Dalga 25 Watt Verici

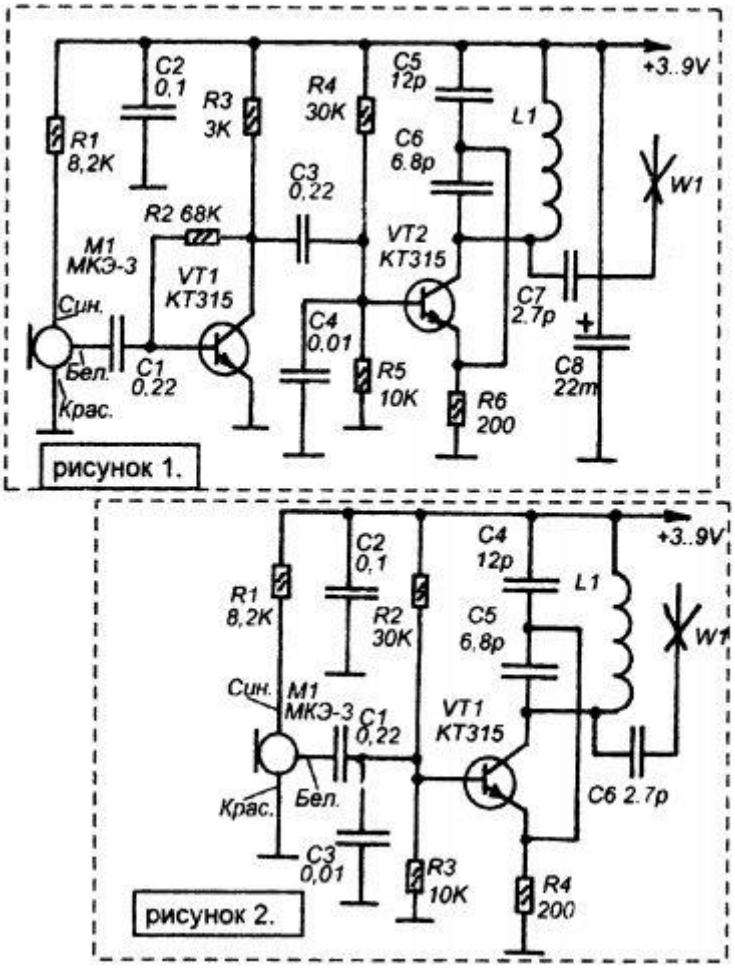




AM Kısa Dalga 50 Watt Verici



Telsiz Mikrofon



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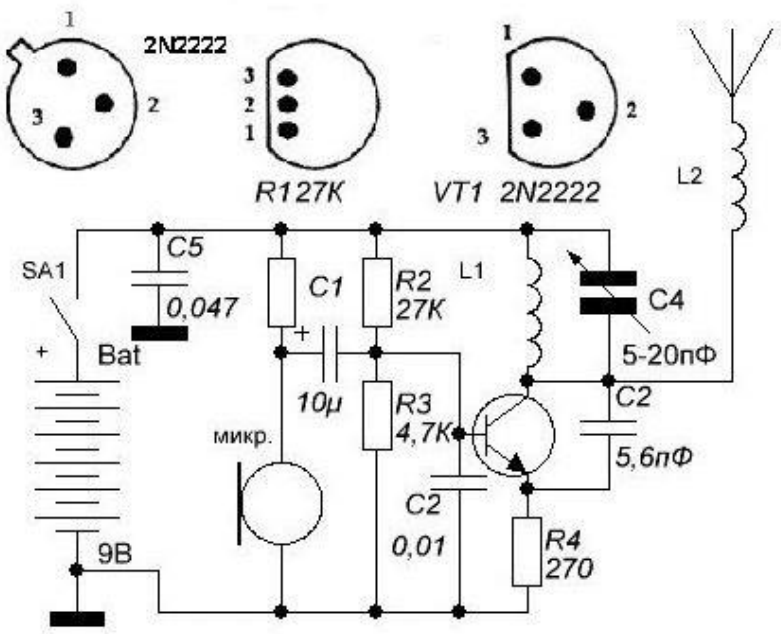

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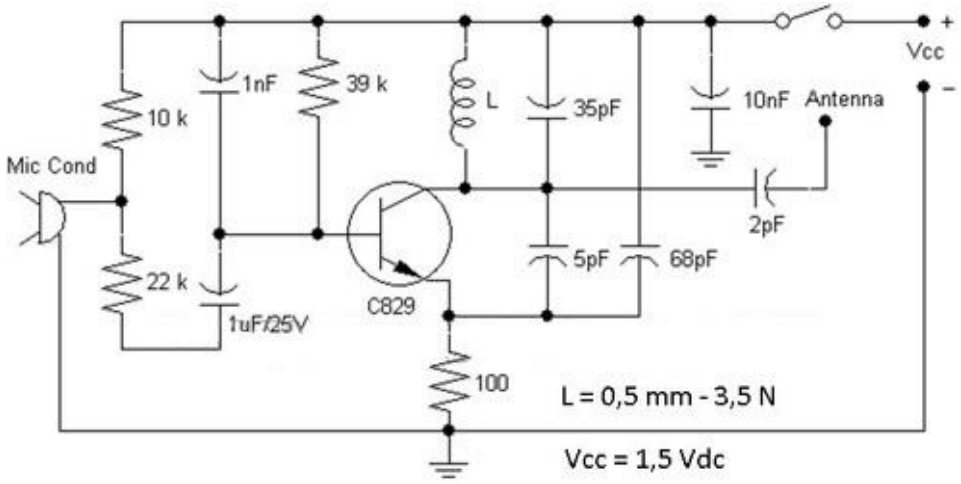

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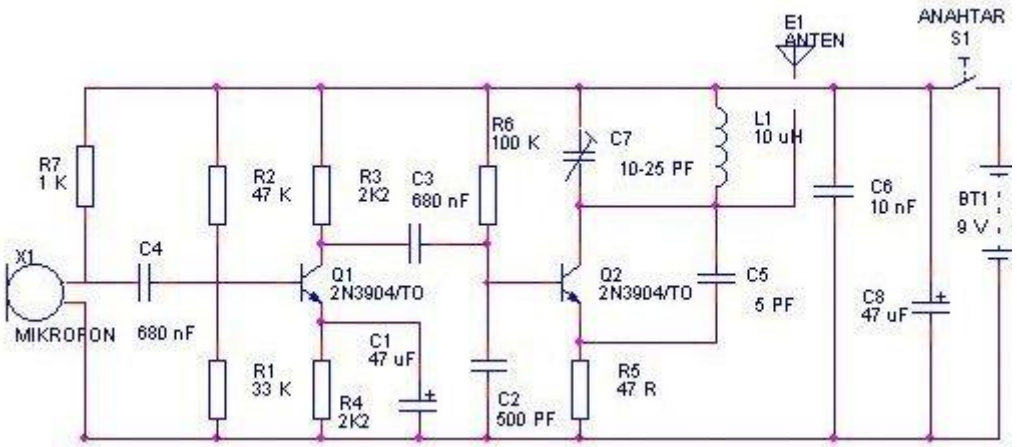

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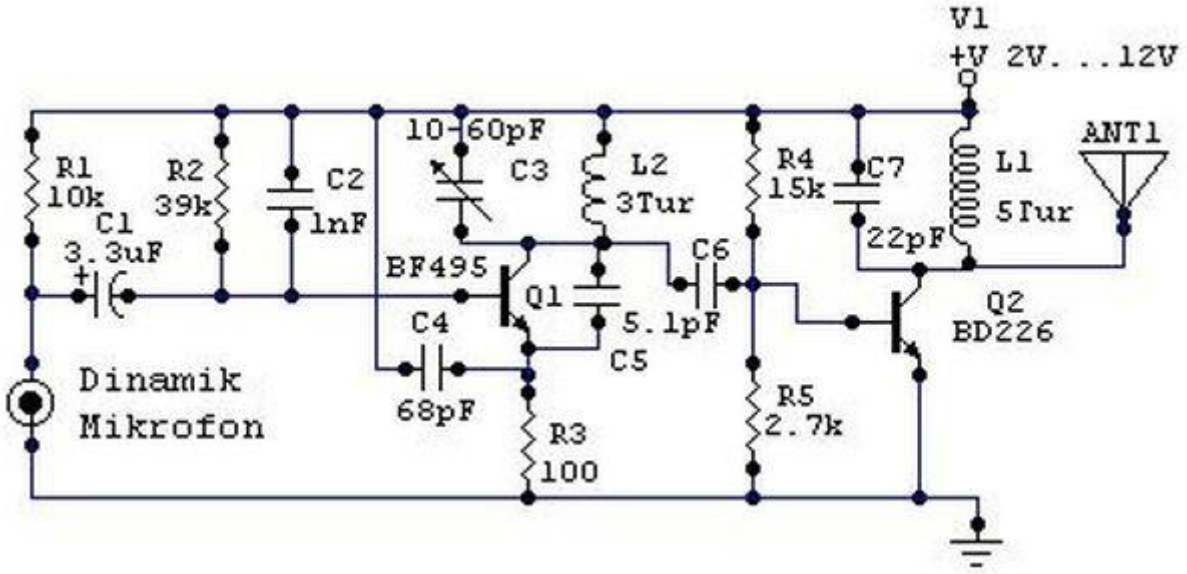

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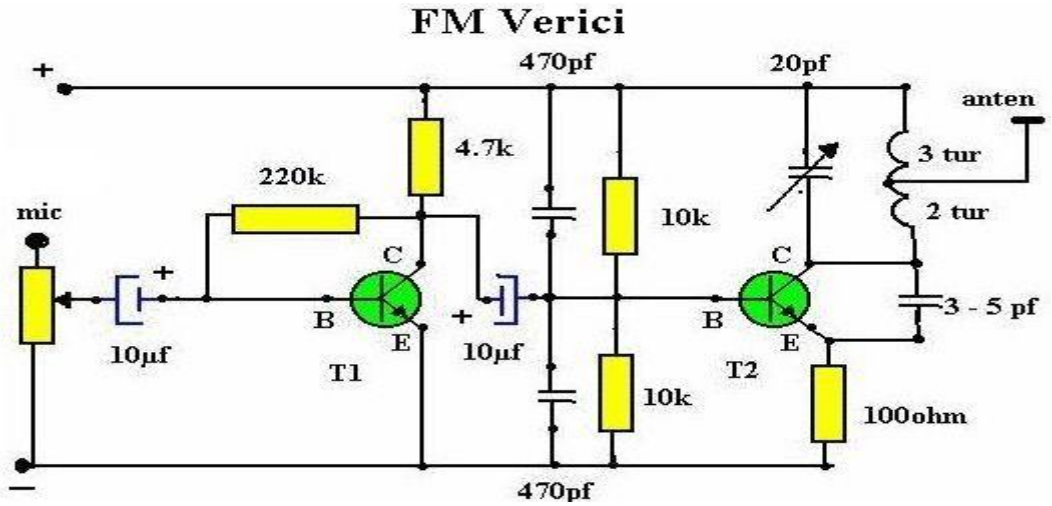

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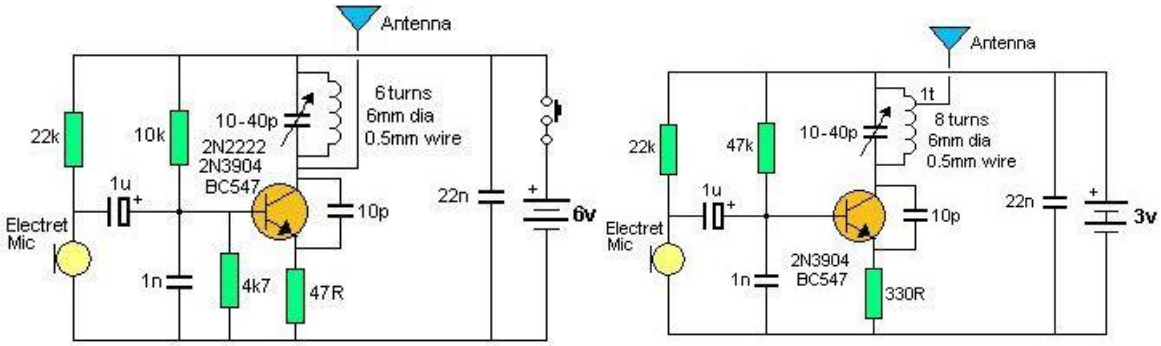

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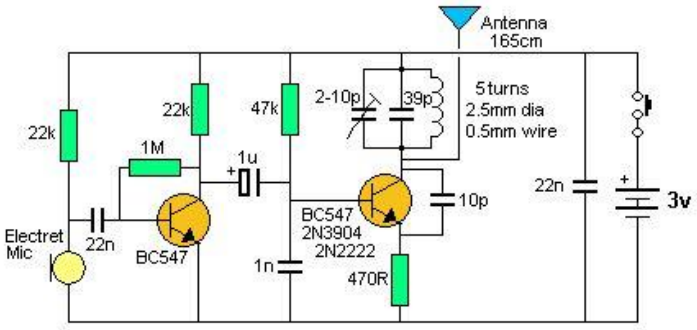

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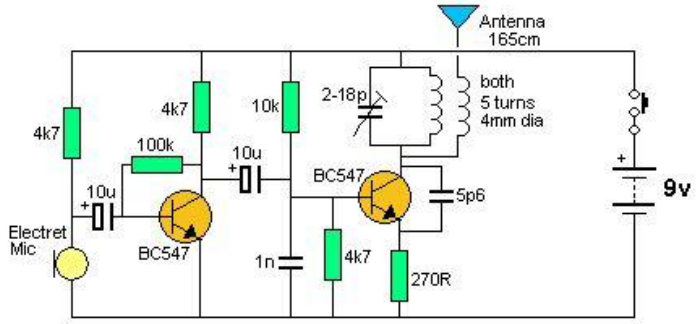

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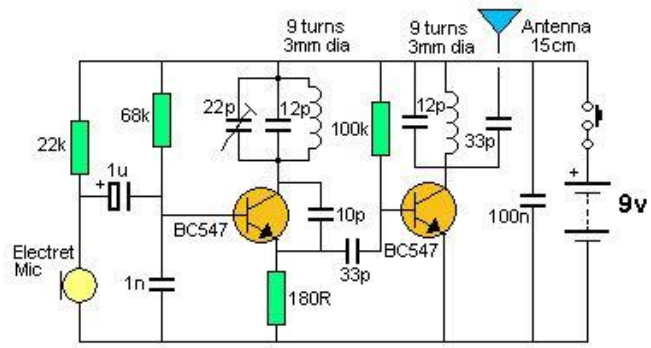

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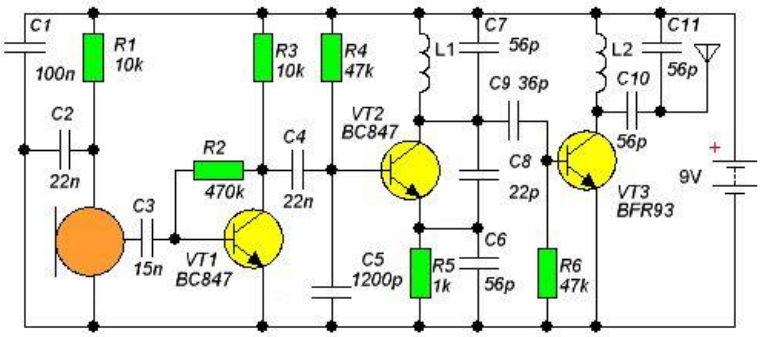

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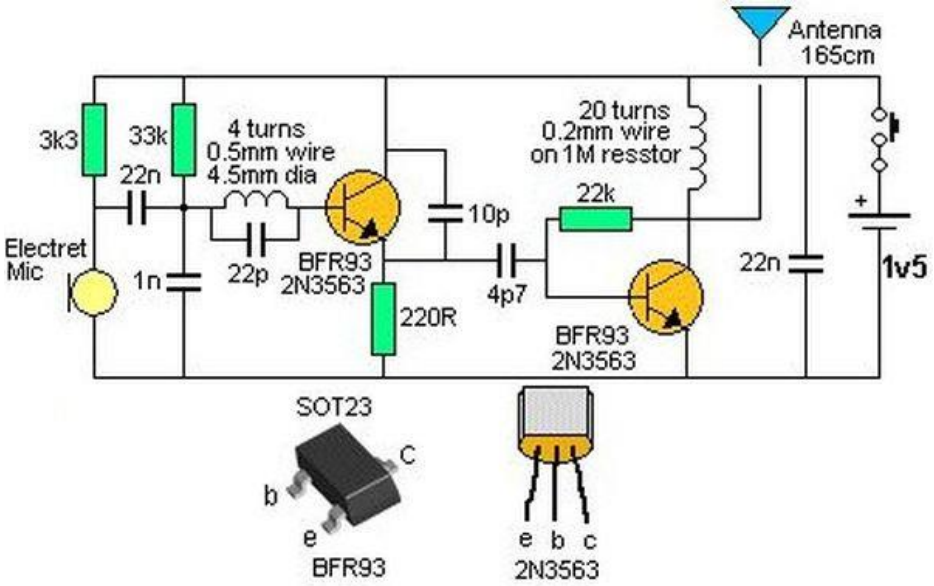

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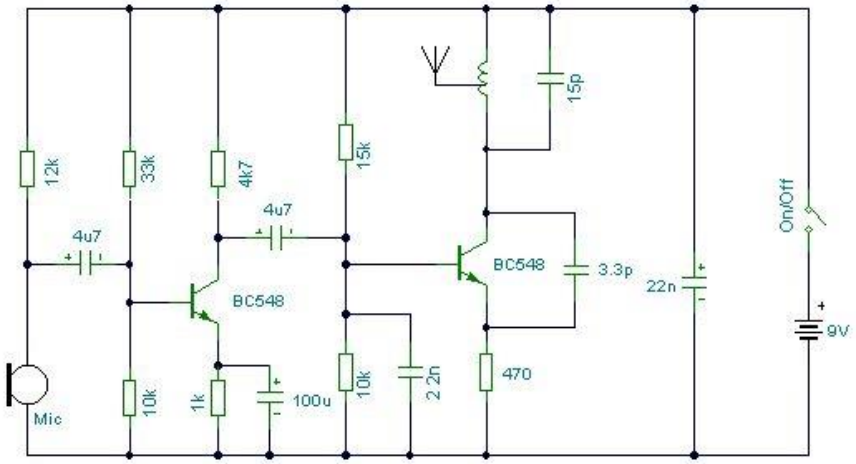

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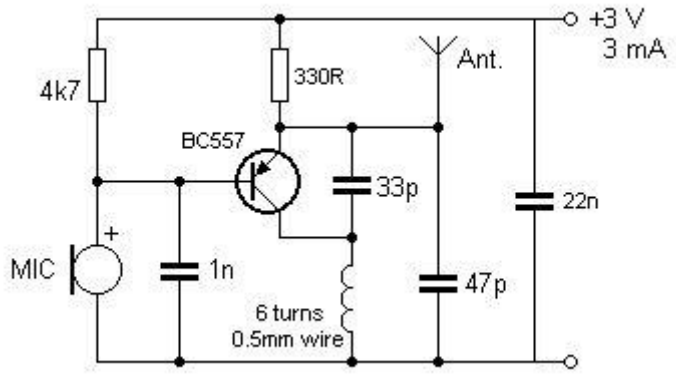

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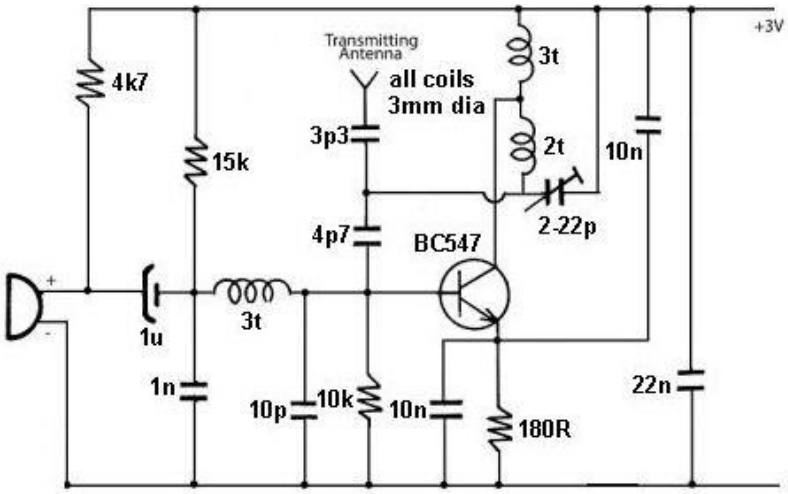

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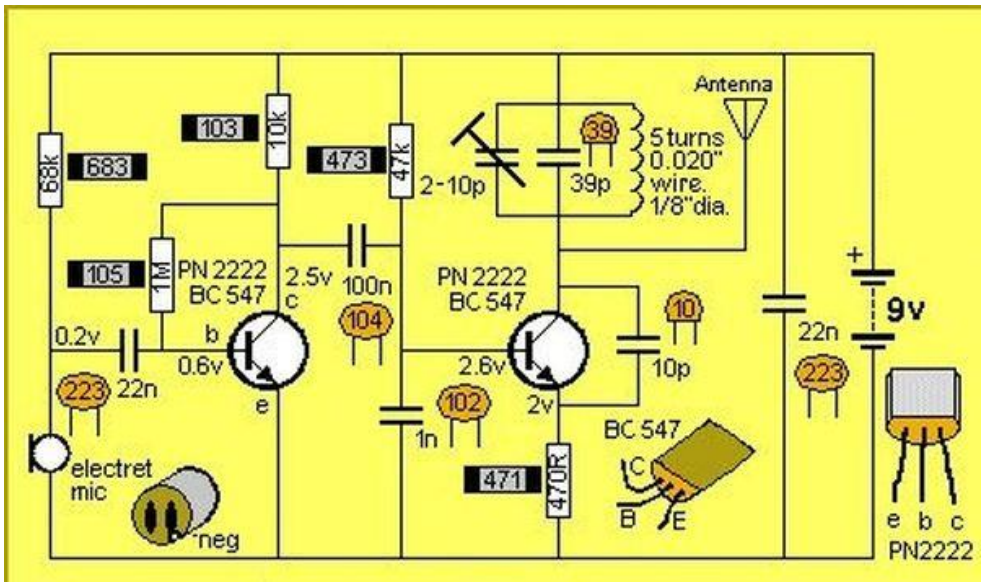

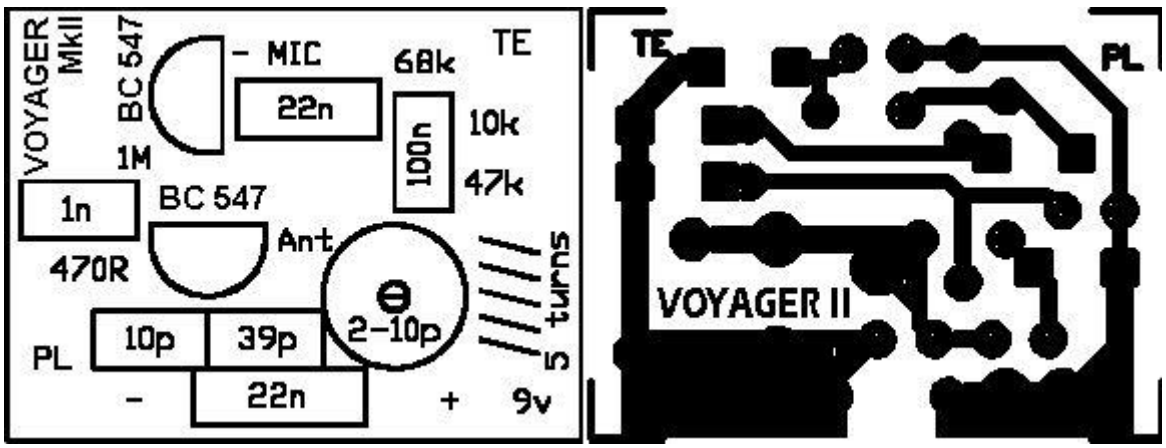

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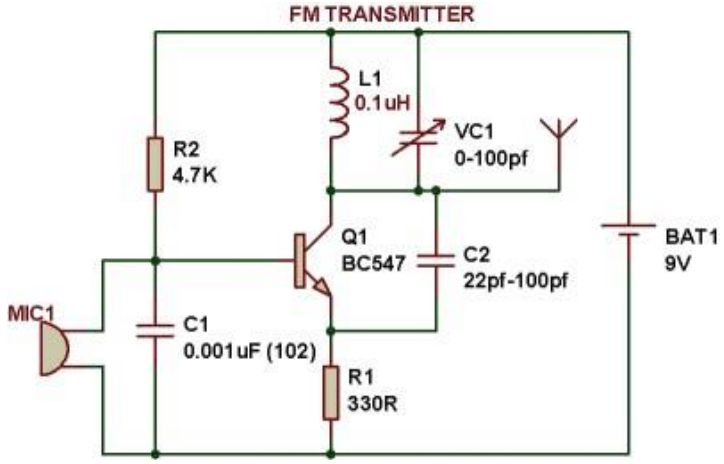

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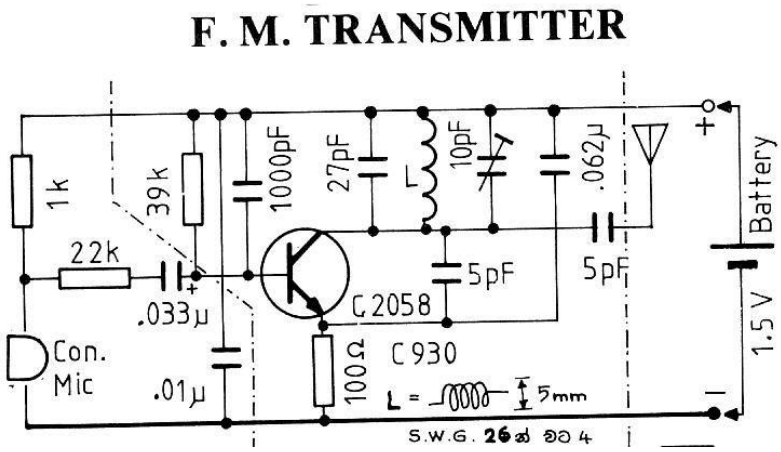
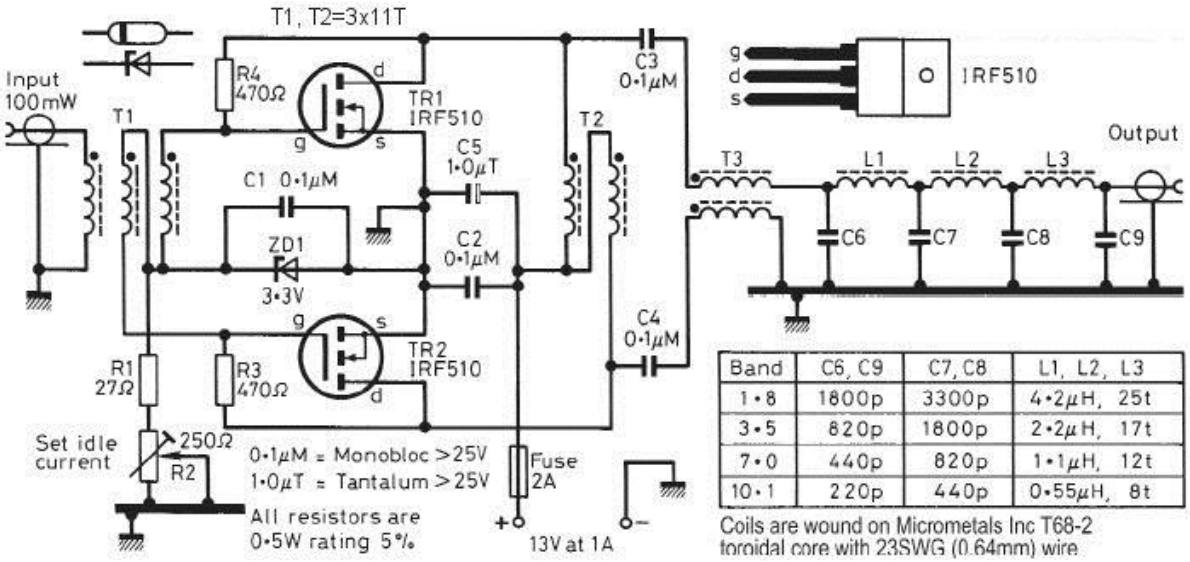
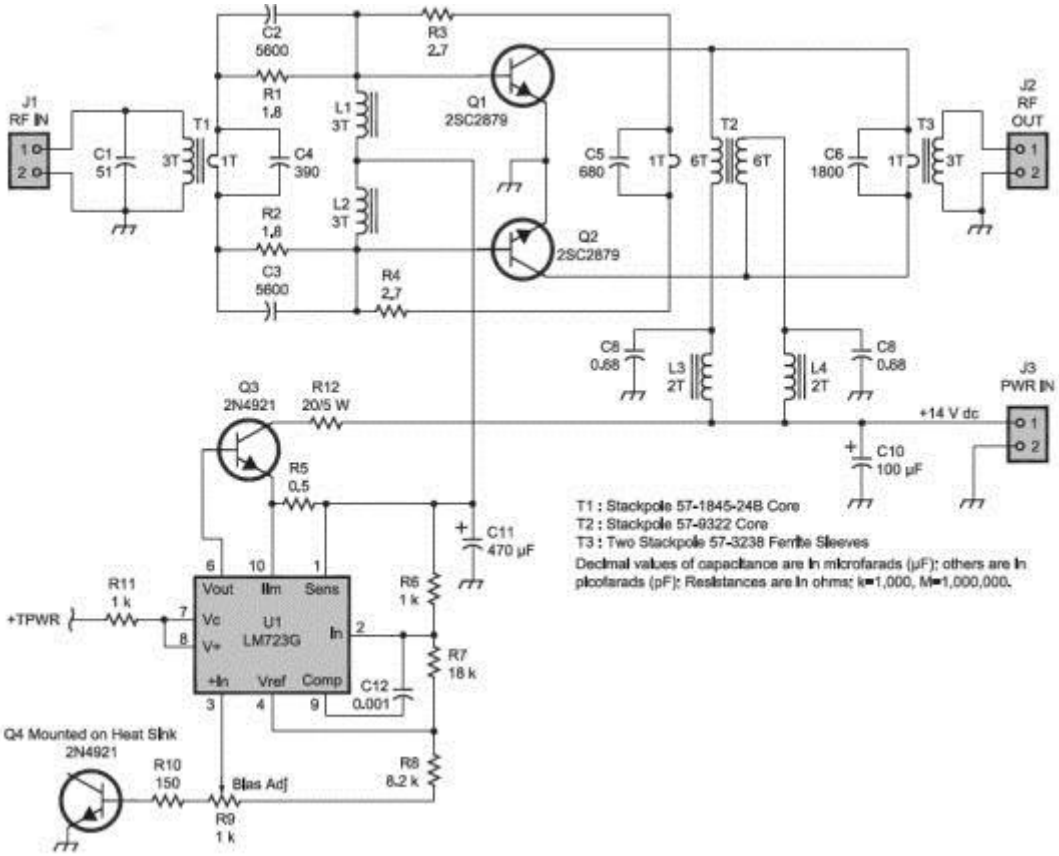


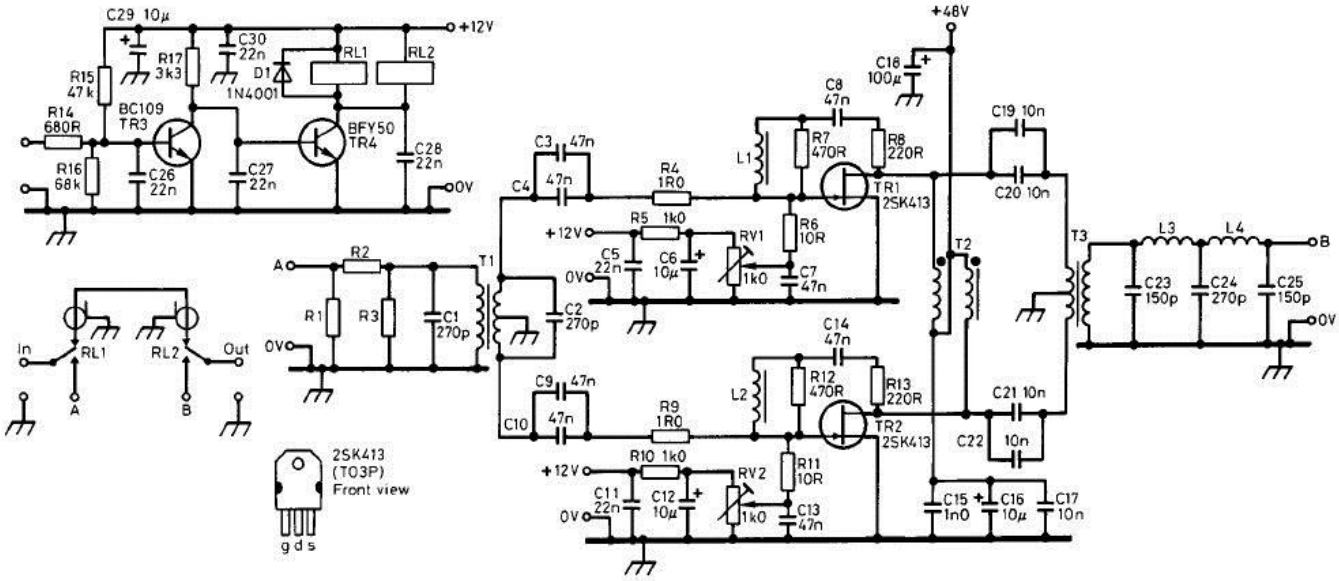
1.8 Mhz – 10.1 Mhz 5 Watt RF Amplifikatör



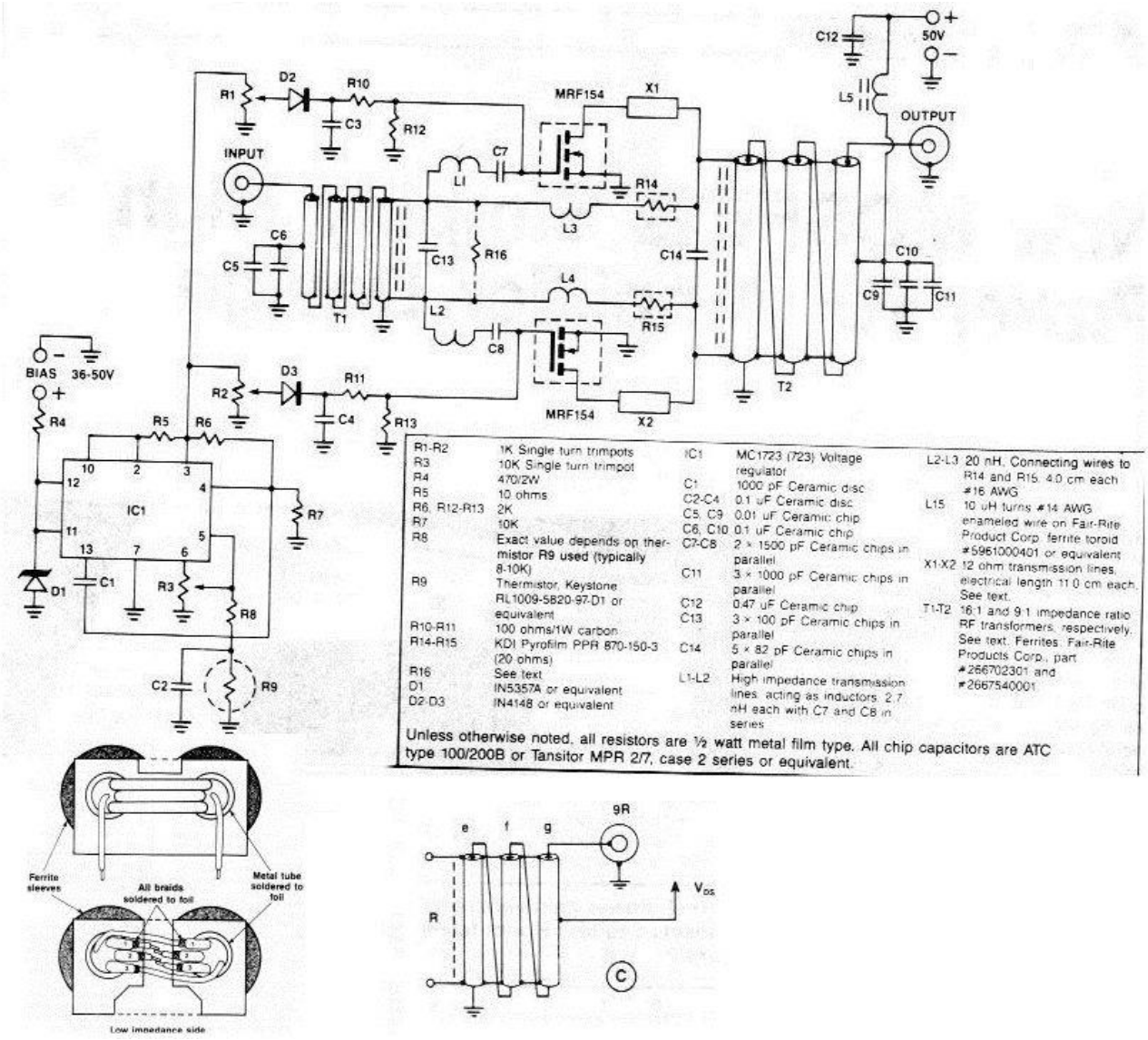
1 Mhz – 30 Mhz 150 Watt RF Amplifikatör



14 Mhz 100 Watt RF Amplifikatör



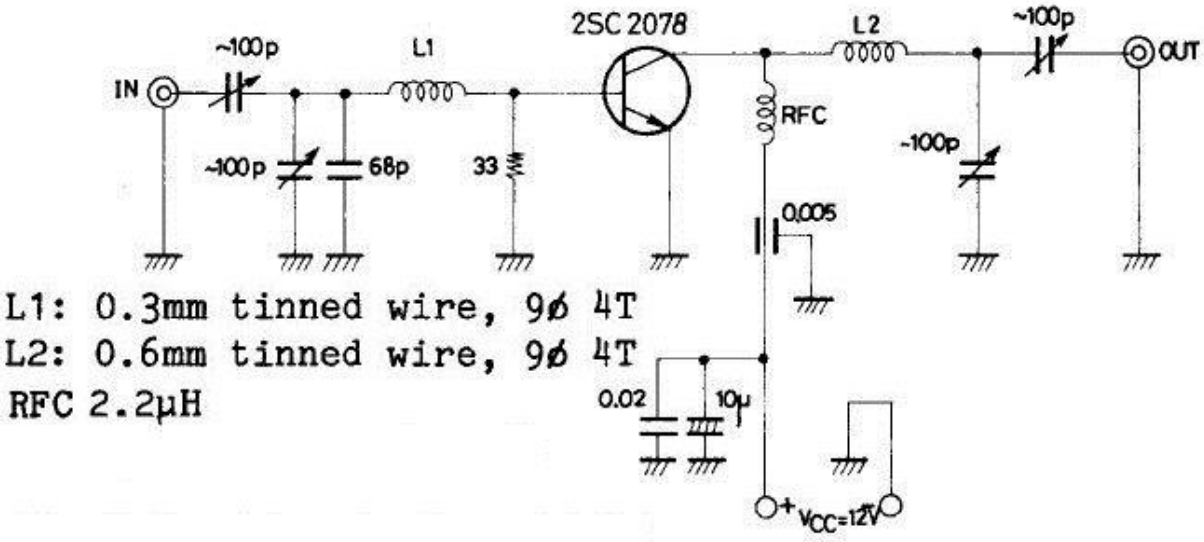
10 Mhz – 90 Mhz 1000 Watt RF Amplifikatör



R1-R2	1K Single turn trimpots	IC1	MC1723 (723) Voltage regulator	L2-L3	20 nH. Connecting wires to R14 and R15. 4.0 cm each #16 AWG
R3	10K Single turn trimpot	C1	1000 pF Ceramic disc	L15	10 uH turns #14 AWG enameled wire on Fair-Rite Product Corp. ferrite toroid #5961000401 or equivalent
R4	470/2W	C2-C4	0.1 uF Ceramic disc	X1-X2	12 ohm transmission lines, electrical length 11.0 cm each. See text.
R5	10 ohms	C5, C9	0.01 uF Ceramic chip	T1-T2	16:1 and 9:1 impedance ratio RF transformers, respectively. See text. Ferrites: Fair-Rite Products Corp., part #266702301 and #266754001
R6, R12-R13	2K	C6, C10	0.1 uF Ceramic chip		
R7	10K	C7-C8	2 × 1500 pF Ceramic chips in parallel		
R8	Exact value depends on thermistor R9 used (typically 8-10K)	C11	3 × 1000 pF Ceramic chips in parallel		
R9	Thermistor, Keystone RL1009-5820-97-D1 or equivalent	C12	0.47 uF Ceramic chip		
R10-R11	100 ohms/1W carbon	C13	3 × 100 pF Ceramic chips in parallel		
R14-R15	KDI Pyrofilm PPR 870-150-3 (20 ohms)	C14	5 × 82 pF Ceramic chips in parallel		
R16	See text	L1-L2	High impedance transmission lines acting as inductors. 2.7 nH each with C7 and C8 in series		
D1	IN5357A or equivalent				
D2-D3	IN4148 or equivalent				

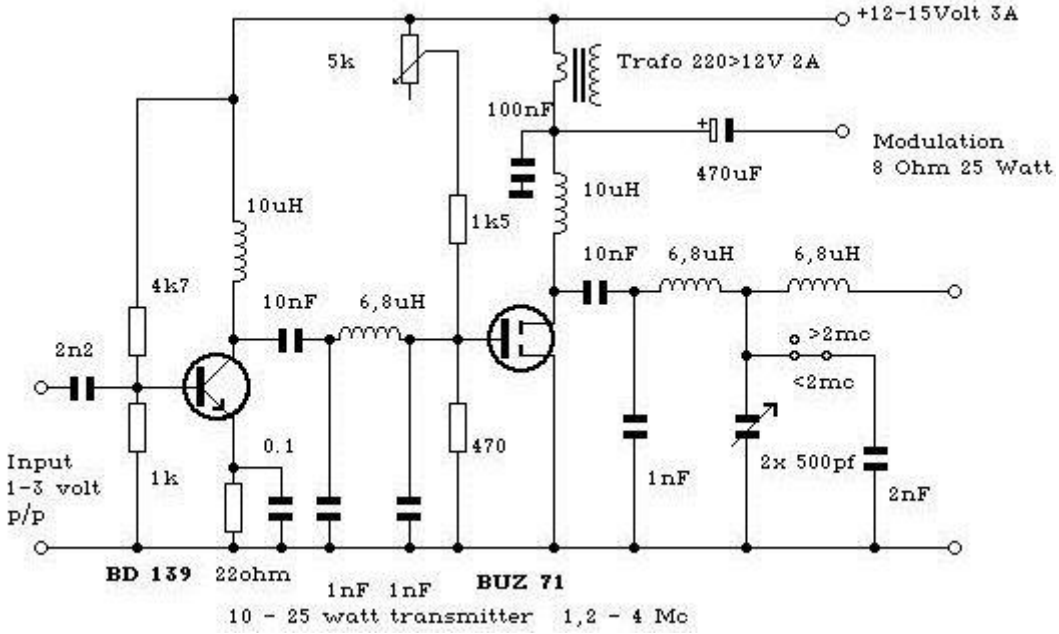
Unless otherwise noted, all resistors are ½ watt metal film type. All chip capacitors are ATC type 100/200B or Tansitor MPR 2/7, case 2 series or equivalent.

27 Mhz 4 Watt RF Amplifikatör



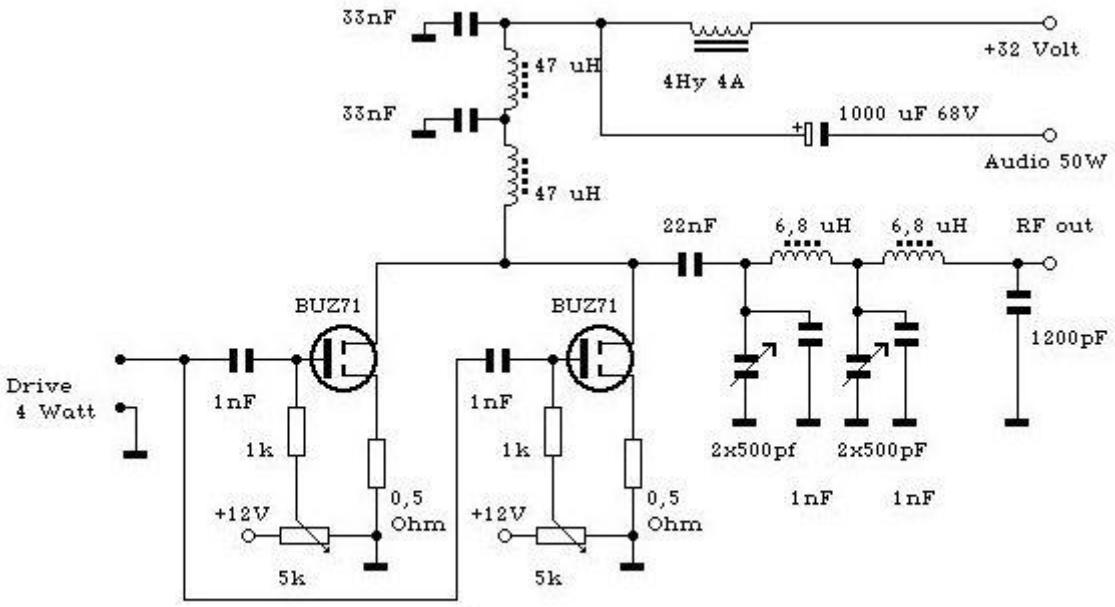
L1: 0.3mm tinned wire, 9ø 4T
L2: 0.6mm tinned wire, 9ø 4T
RFC 2.2µH

27 Mhz 25 Watt RF Amplifikatör



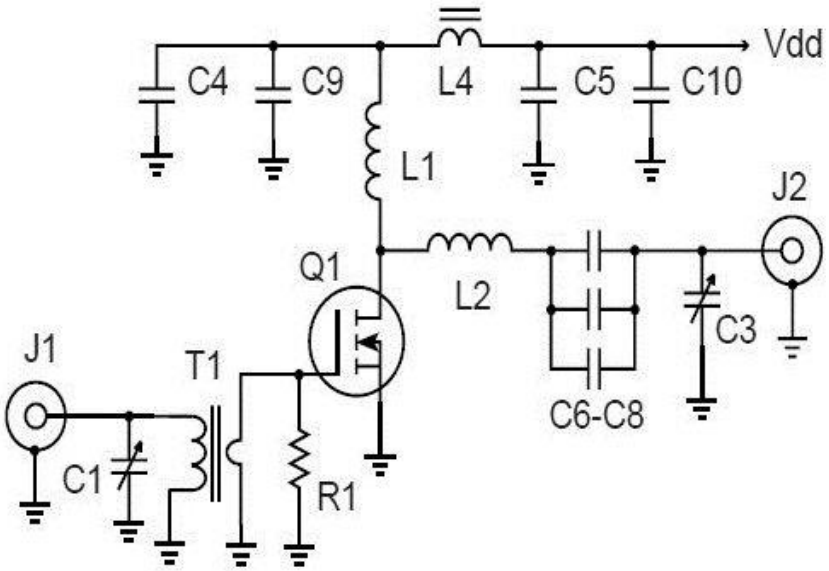
10 - 25 watt transmitter 1,2 - 4 Mc

27 Mhz 50-70 Watt RF Amplifikatör



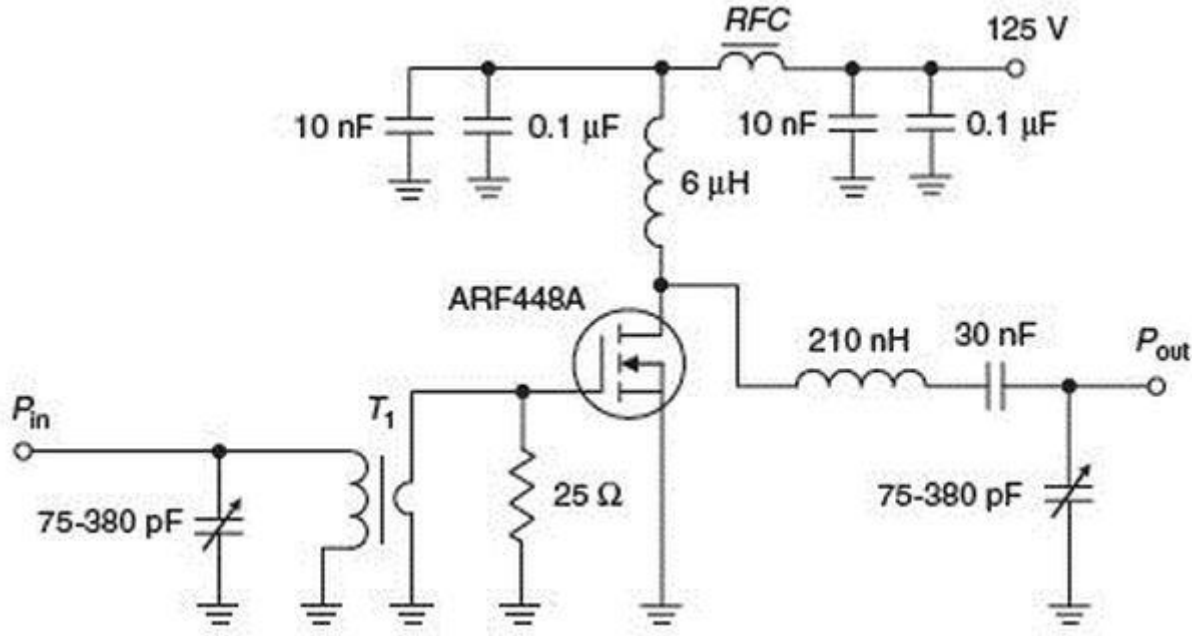
MW Final Amplifier AM Modulated 50 - 70 Watt

27 Mhz 500 Watt RF Amplifikatör

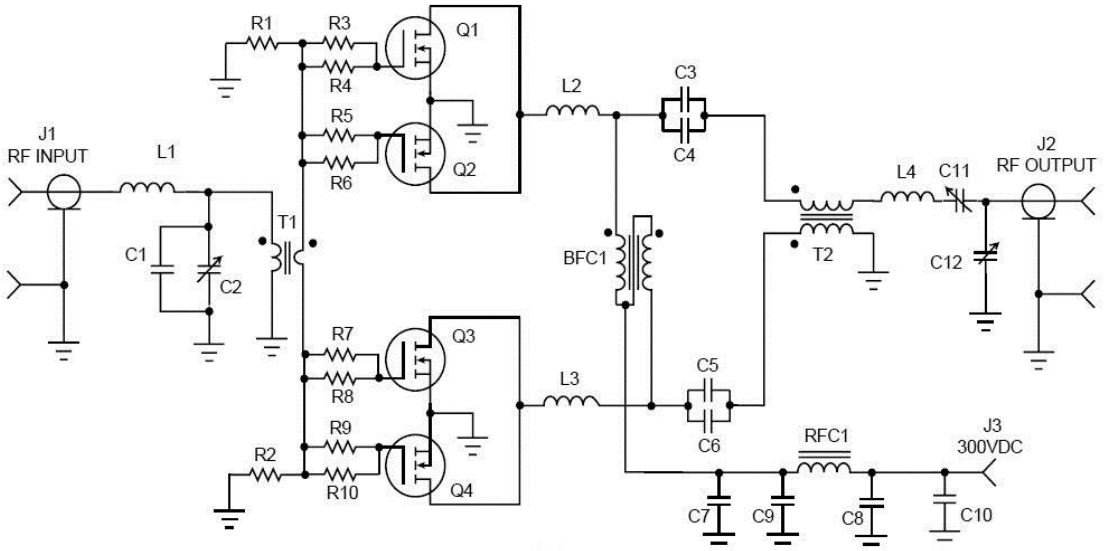


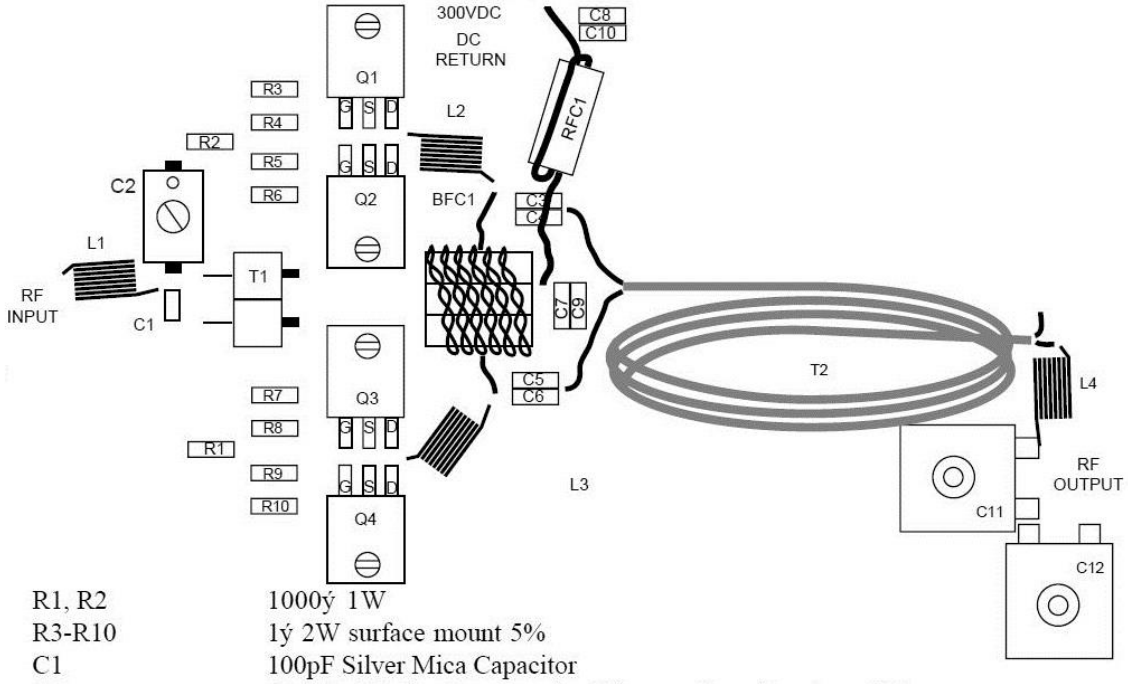
C1,C3	75-380 pF mica trimmer, ARCO 465
C4-C8	.01 uF 1 kV disc ceramic
C9,C10	.1 uF 500V disc ceramic
L1	6 uH. 25t #24 ga.enam. 0.5" dia.
L2	210 nH. 4t #8 ga. .75" id, 1" long
L4	2t #20 PTFE on .5" ferrite bead μ=850
Q1	APT ARF448A
R1	25Ω 5W non-inductive
T1	Pri: 4t #20 PTFE, Sec: 1t brass tube on 2 hole balun bead Fair-Rite #2843010302 μ=850

27 Mhz 500 Watt RF Amplifikatör



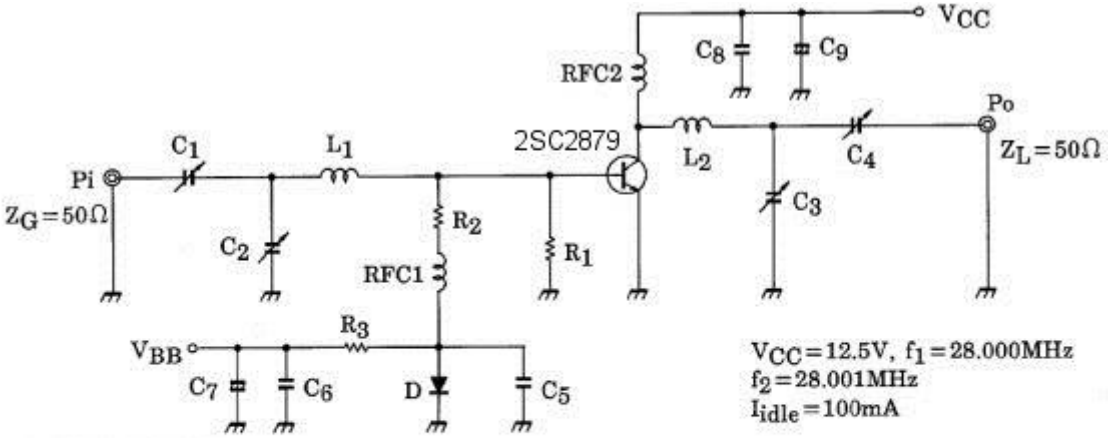
27 Mhz 1000 Watt RF Amplifikatör





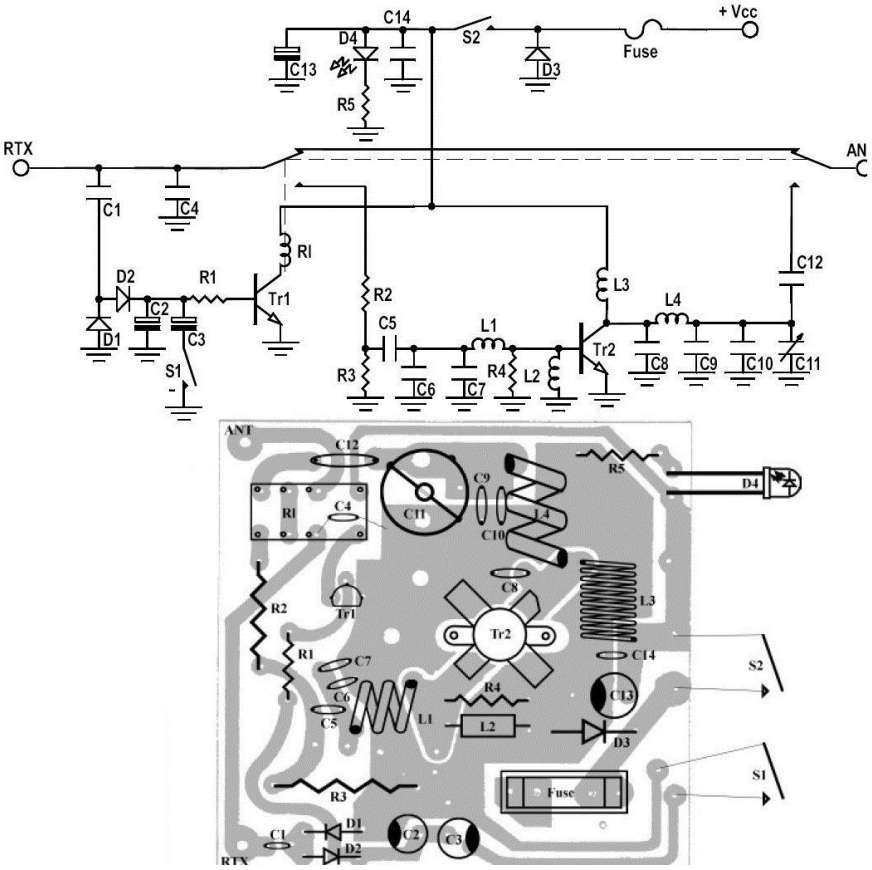
R1, R2	1000ý 1W
R3-R10	1ý 2W surface mount 5%
C1	100pF Silver Mica Capacitor
C2	40-200 pF Mica Compression Trimmer Capacitor, Arco 425
C3-C8, C13, C14	0.01µF Disk Ceramic
C9, C10	0.001 Disk Ceramic
C11	250-480pF Mica Compression Trimmer Capacitor, Sprague GME 90901
C12	95-230pF Mica Compression Trimmer Capacitor, Sprague GME 90501
Q1, Q3	ARF446
Q2, Q4	ARF447
L1	.470µH 5.5t, #18AWG enam .438" dia
L2, L3, L4	0.145µH: 3.5T, #14AWG, ID=0.438
RFC1	2T, #18 PTFE on a Fair-Rite #2643665702 shield bead, μ_i=850
T1	4:1 conventional transformer; pri: 2T #18 stranded PTFE coated wire, sec: 1T #14 tinned braid on two Fair-Rite #2643540002, µi=850
T2	1:1 (Z) coaxial balun transformer; 24 inches RG303 PTFE Coax formed into a 3 T, 2.5" dia.
BFC1	6T, #24 twisted pair enamel wire on three stacked Fair-Rite 596118021 toroids.

28 Mhz 100 Watt RF Amplifikatör



C1, C2	:7~150pF	L1	:φ0.8 ENAMEL COATED COPPER WIRE, 14ID, 4T, 4P
C3, C4	:7~150pF 2KWV	L2	:φ1.2 ENAMEL COATED COPPER WIRE, 14ID, 3 1/2T, 3P
C5, C6	:0.022μF	RFC1	:φ0.8mm EMAMEL COATED COPPER WIRE, 10ID, 9T (Ferrite Core TDK K2)
C7	:47μF 10WV	RFC2	:φ1.8mm ENAMEL COATED COPPER WIRE, 14ID, 20T
C8	:0.044μF	R1	:10Ω (1W)
C9	:100μF 50WV	R2	:2Ω (1/2W)
		R3	:10Ω (5W)
		D	:1S1555

28 Mhz 150 Watt RF Amplifikatör

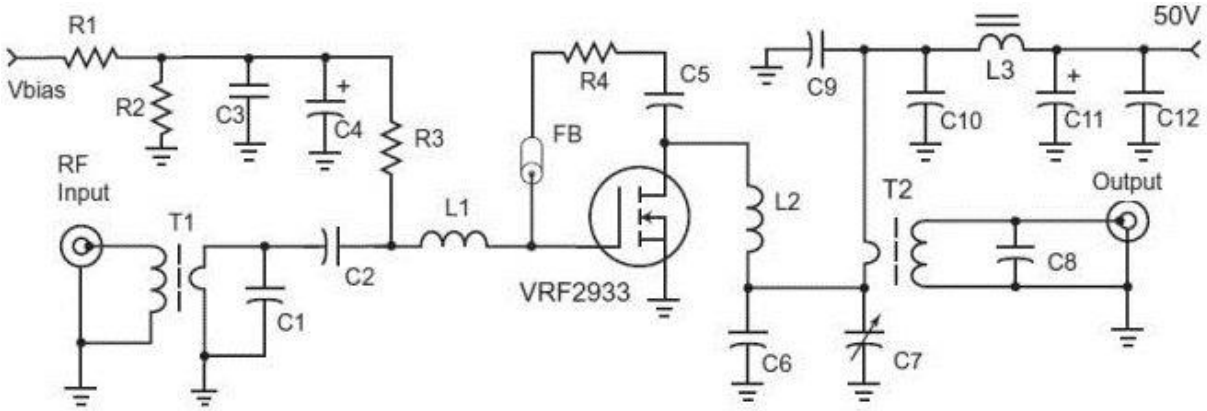


List of components

C1	= 8,2 pF	50 V	N750
C2	= 4,7 µF	16 V	
C3	= 33 µF	16 V	
C4	= 33 pF	50 V	N750
C5	= 100 pF	50 V	N750
C6	= 220 pF	50 V	N750
C7	= 270 pF	50 V	N750
C8	= 150 pF	500 V	N750
C9	= 180 pF	500 V	N750
C10	= 270 pF	500 V	N750
C11	=		
C12	= 180 pF	500 V	N750
C13	= 33 µF	35 V	
C14	= 100 nF	50 V	
R1	= 2,2 Kω	¼W	
R2	= 15 ω	2W	
R3	= 180 ω	2W	
R4	= 10 ω	½W	
R5	= 2,2 Kω	½W	

D1 = D2 = 1N4148
D3 = 1N5400
D4 = Led
TR1 = BC 547
TR2 = MRF 422
S1 = Switch (AM - SSB)
S2 = Switch (ON - OFF)
L1 = 3 turns ϕ 8 mm wire ϕ 0,8 mm
L2 = VK 200
L3 = 12 turns ϕ 6 mm wire ϕ 1 mm
L4 = 4 turns ϕ 8 mm wire ϕ 1,2 mm
RI = Relè 24 V 3022
Fuse = 10 A

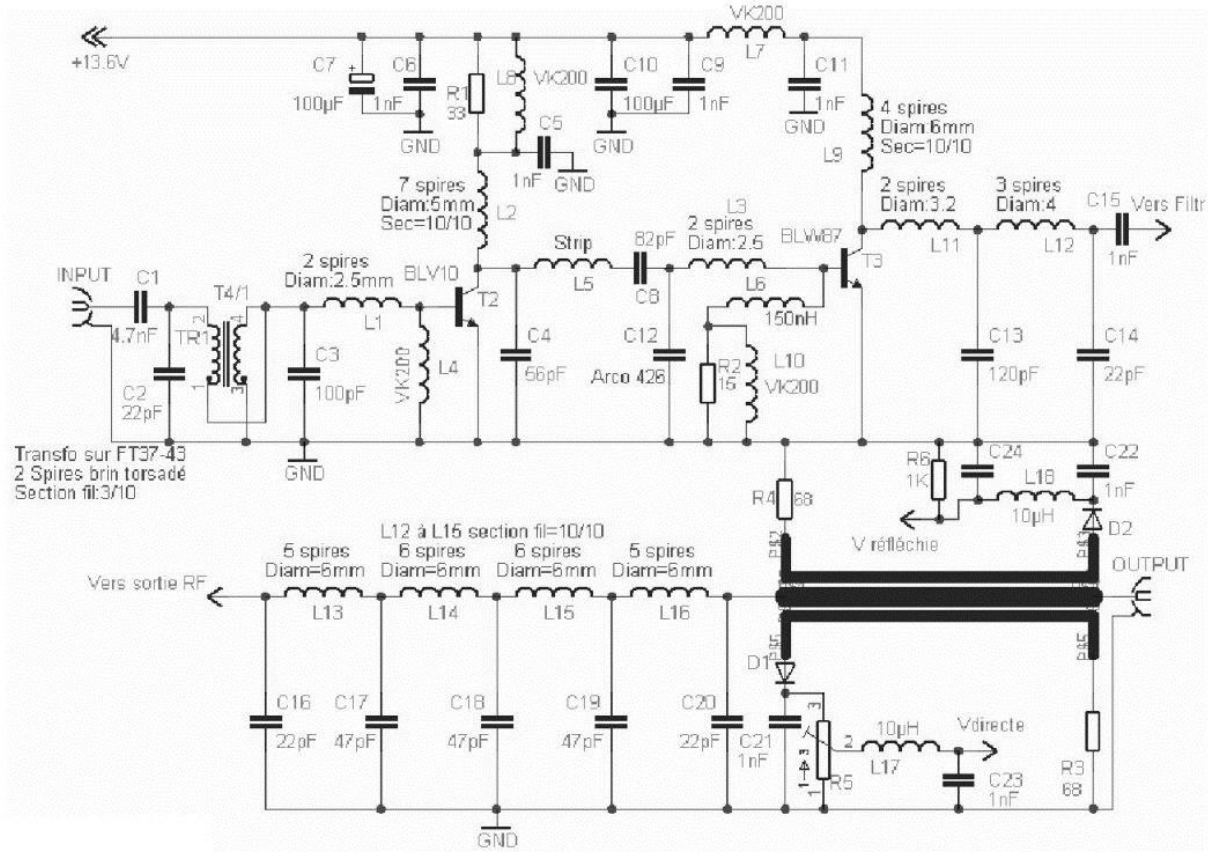
30 Mhz 300 Watt RF Amplifikatör



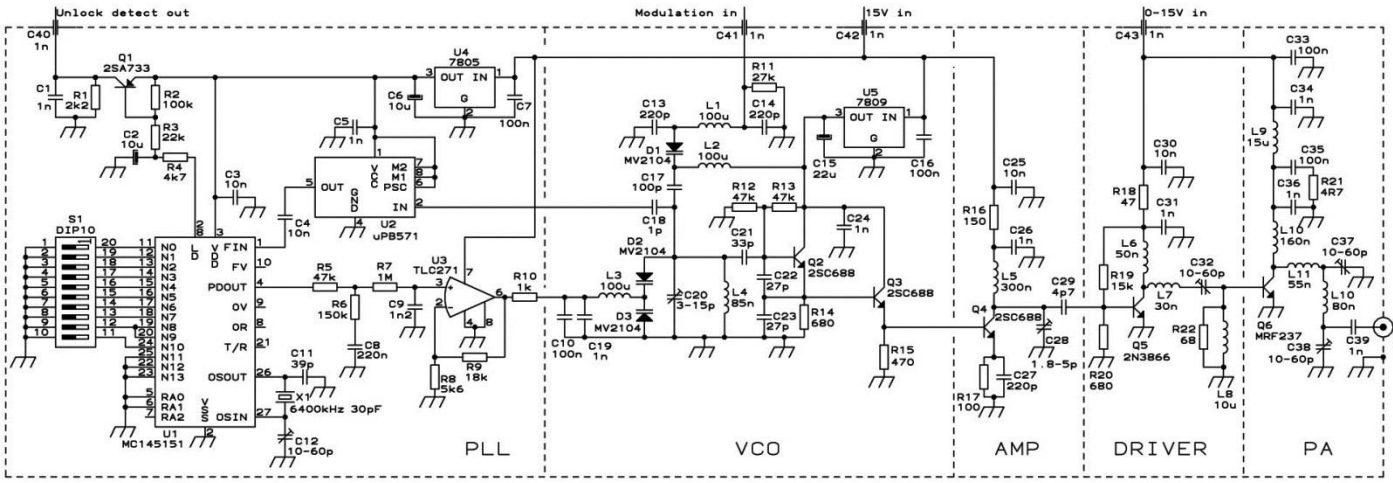
C1 1800pF ATC100B ceramic
C2, C3, C5, C9, C10, C12 0.1uF 100V
C6 680 pF metal clad 500V mica
C7 ARCO 467 mica trimmer
C8 100 pF ATC 100E ceramic
C4, C11 10uF 100V Electrolytic
FB small ferrite bead u_i =125
L1 20 nH 2t #18 0.188"d .2"l
L2 38 nH - 2.5t #14 enam. .25" dia.

L3 2t #16 on 2x 267300081 .5" bead
R1-R2 1k Ohm 1/4W
R3 100 Ohm 1W
R4 470 Ohm "low inductance" 3W
T1 16:1 transforner 4t #20 teflon on RF Parts Co. T1/2 transformer core
T2 9:1 transformer 3t #16 teflon on RF Parts Co. T1 transformer core

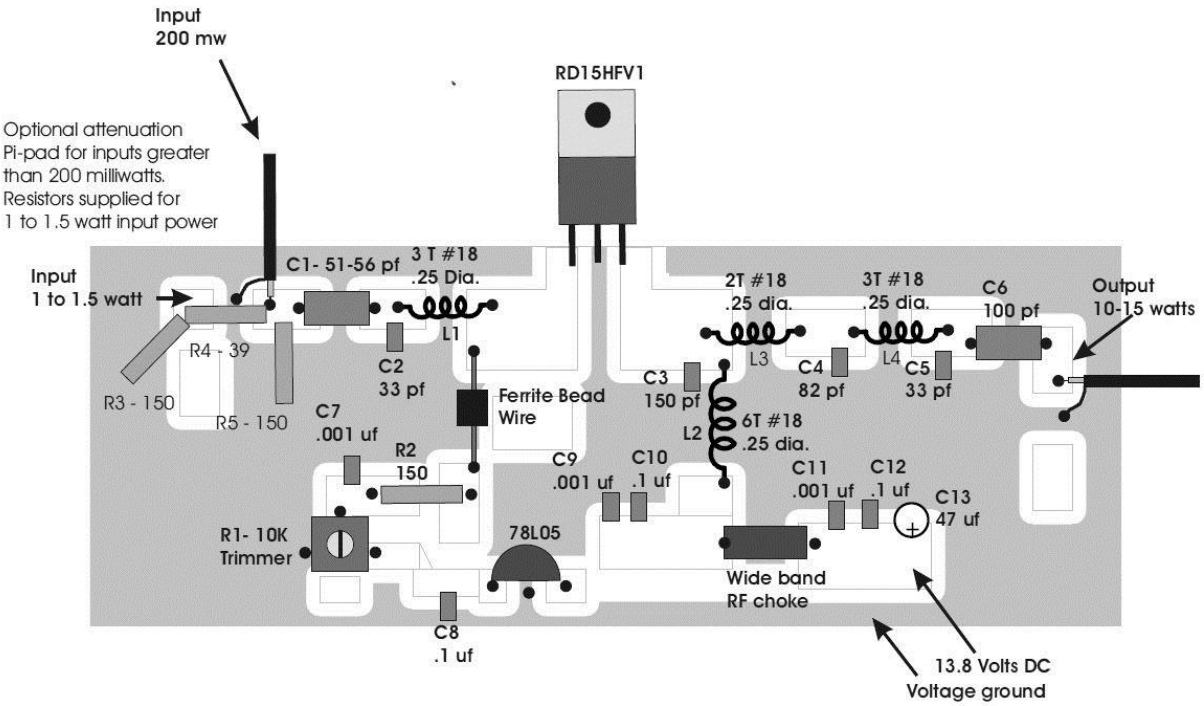
88-108 Mhz 20 Watt FM RF Amplifikatör



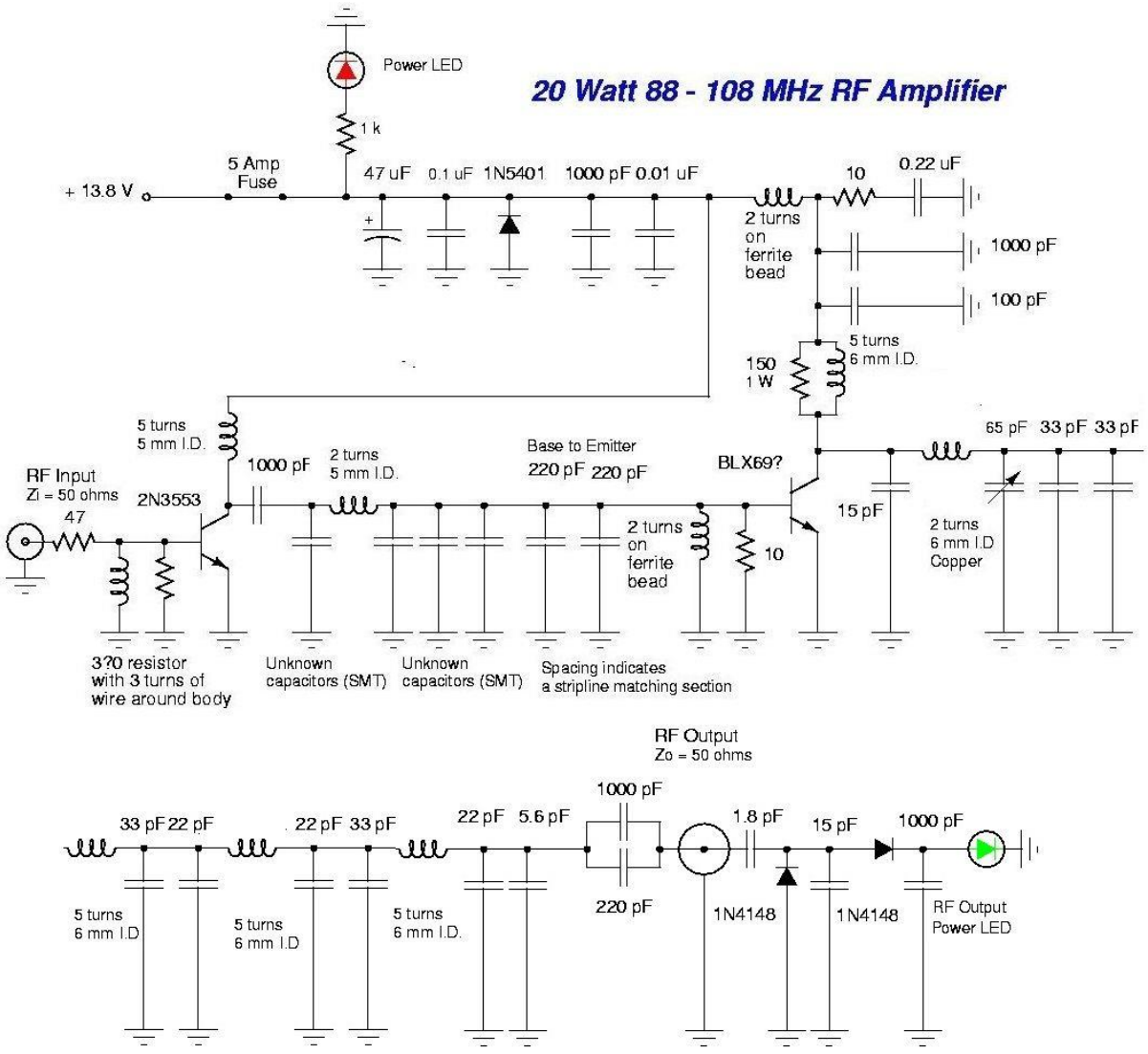
88-108 Mhz 4 Watt FM RF Amplifikatör



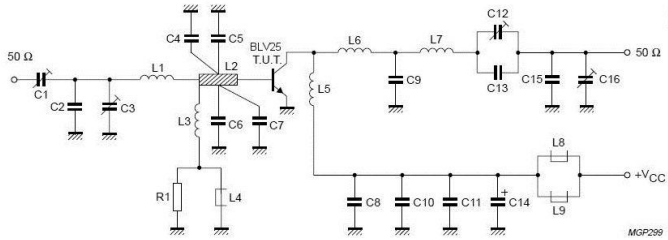
88-108 Mhz 15 Watt FM RF Amplifikatör



88-108 Mhz 20 Watt FM RF Amplifikatör

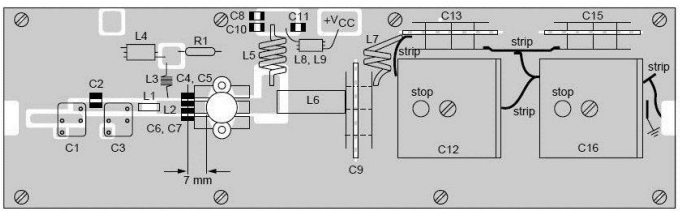


88-108 Mhz 175 Watt FM RF Amplifikatör



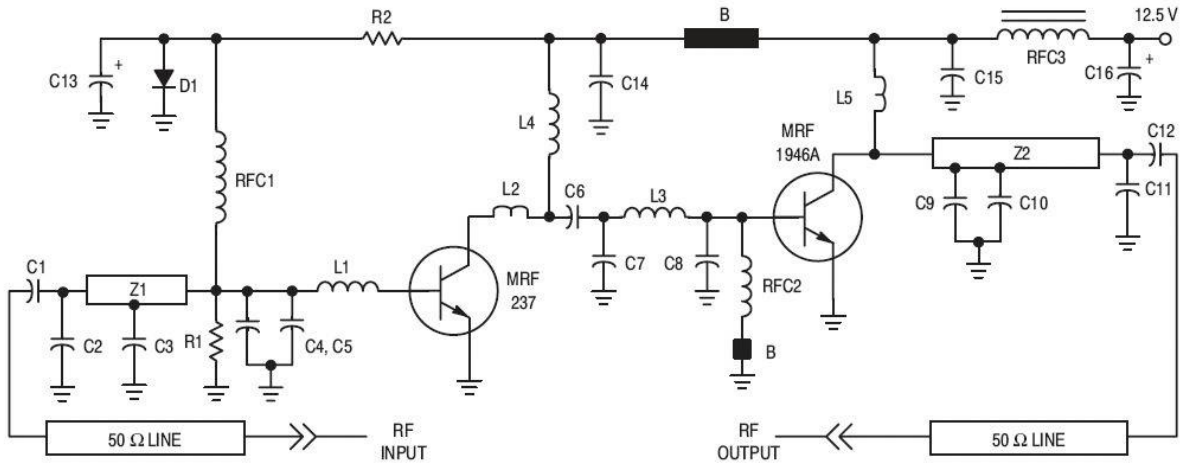
List of components

C1 = C3 = 7 to 100 pF film dielectric trimmer (cat. no. 2222 809 07015)
C2 = C4 = C5 = C6 = C7 = 100 pF (500 V) multilayer ceramic chip capacitor (ATC(1)); except for C2 these capacitors are placed 7 mm from transistor edge
C8 = C10 = 470 pF multilayer ceramic chip capacitor (cat. no. 2222 856 13471)
C9 = C15 = 40 pF, parallel connection of 4 x 10 pF lead feed-through capacitors
C11 = 100 nF multilayer ceramic chip capacitor (cat. no. 2222 852 59104)
C12 = C16 = 7 to 47 pF precision tuning capacitor (cat. no. 2222 805 00174)
C13 = 19 pF, parallel connection of 4 x 4,7 pF lead feed-through capacitors
C14 = 6,8 µF/63 V electrolytic capacitor



L1 = Cu strip (10 mm × 4 mm × 0,5 mm)
L2 = strip on printed-circuit board
L3 = 7 turns closely wound enamelled Cu wire (0,3 mm); int. dia. 3,0 mm; leads 2 × 6 mm
L4 = L8 = L9 = Ferroxcube wide-band h.f. choke, grade 3B (cat. no. 4312 020 36640)
L5 = 3 turns enamelled Cu wire (1,6 mm); int. dia. 8 mm; length 9 mm; leads 2 × 5 mm
L6 = Cu strip (27 mm × 9 mm × 0,5 mm)
L7 = 2 turns enamelled Cu wire (1,6 mm); int. dia. 8 mm; length 9 mm; leads 2 × 10 mm
L2 is strip on a double Cu-clad printed-circuit board with epoxy fibre-glass dielectric, thickness 1/16 in.
R1 = 10 Ω carbon resistor

88-108 Mhz 30 Watt FM RF Amplifikatör

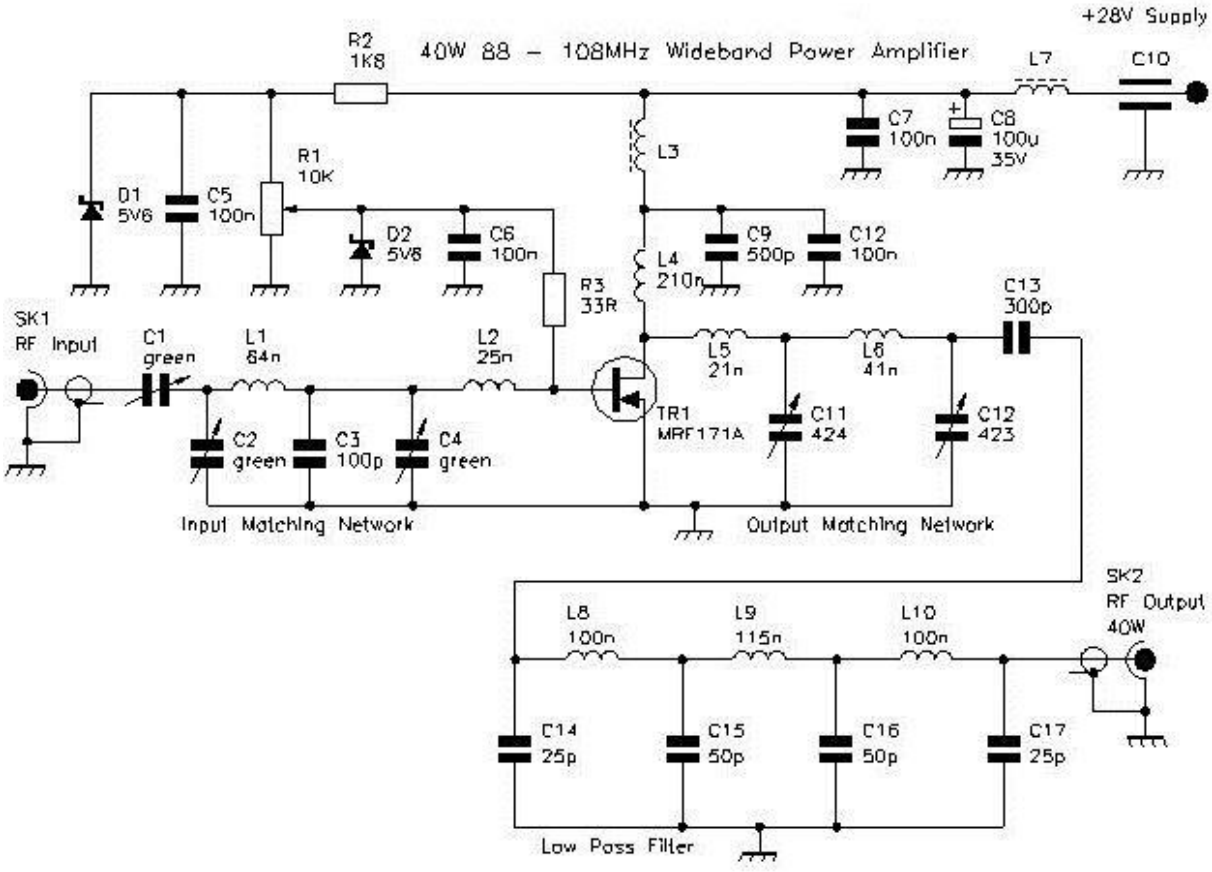


C1 = 56 pF Dura Mica
C2 = 39 pF Mini-Unelco
C3, C7 = 68 pF Mini-Unelco
C4, C5, C6, C9, C10 = 91 pF Mini-Unelco
C8 = 250 pF Unelco J101
C11 = 36 pF Mini-Unelco
C12 = 43 pF Mini-Unelco
C13 = 1 µF, 25 V Tantalum
C14, C15 = 0.1 µF Mono-Block
C16 = 10 µF 25 V Electrolytic

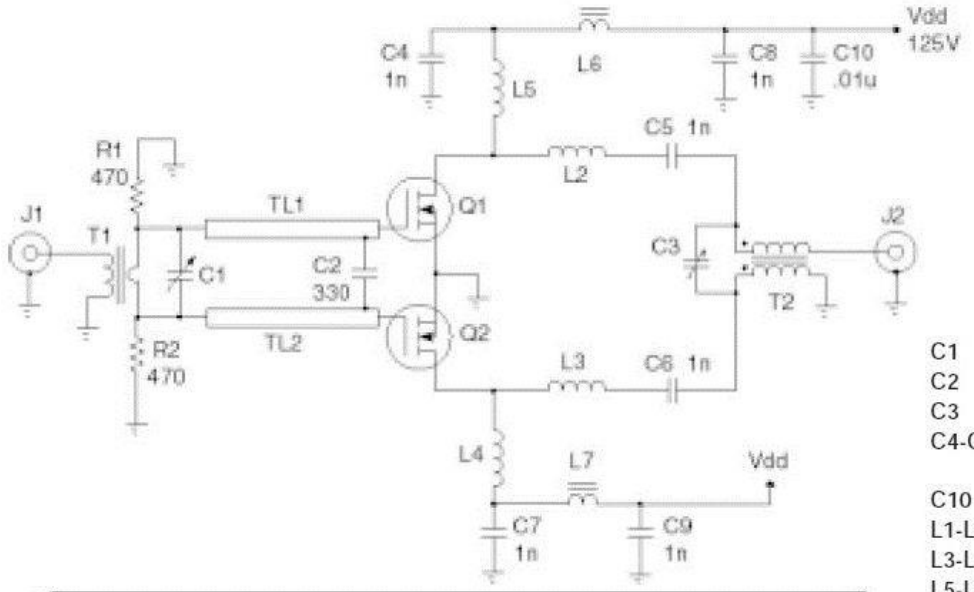
D1 = Diode, 1N4933 or Equivalent
L1 = Base Lead Cut to 0.4″, Formed Into Loop
L2 = Collector Lead Cut to 0.35″, Formed Into Loop
L3 = 0.7" #18 AWG Into Loop
L4 = 7 Turns #18 AWG, 1/8″ ID
L5 = 3 Turns #16 Enam, 3/16″ ID
R1 = 10 Ω, 1/4 W Carbon

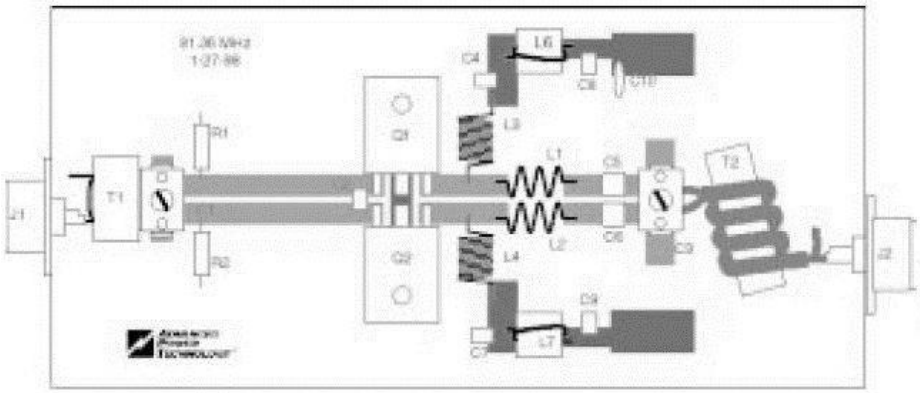
R2 = 1500 Ω, 1/2 W (Select For Most Appropriate ICQ)
RFC1 = 10 µH Molded Choke
RFC2 = 0.15 µH Molded Choke
RFC3 = VK200 – 4B Choke
Z1, Z2 = Printed Line
Z3 = 50 Ohm Printed Line
B = Ferroxcube Ferrite Bead 56-590-65-3B

88-108 Mhz 40 Watt FM RF Amplifikatör



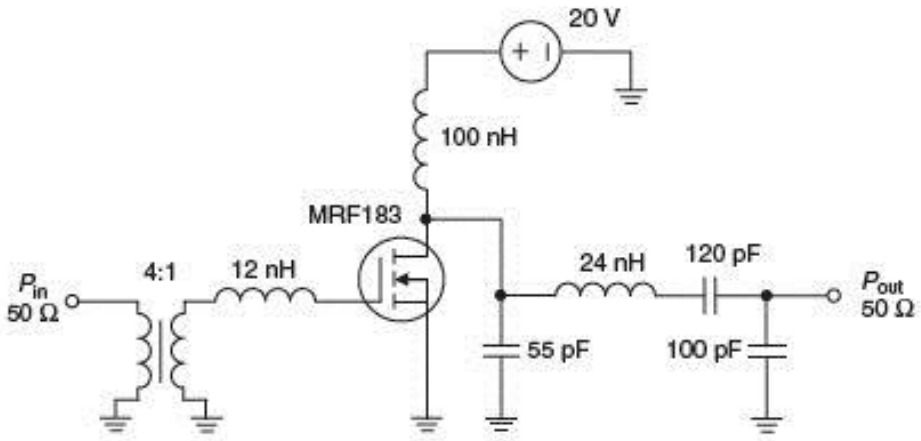
88-108 Mhz 300 Watt FM RF Amplifikatör



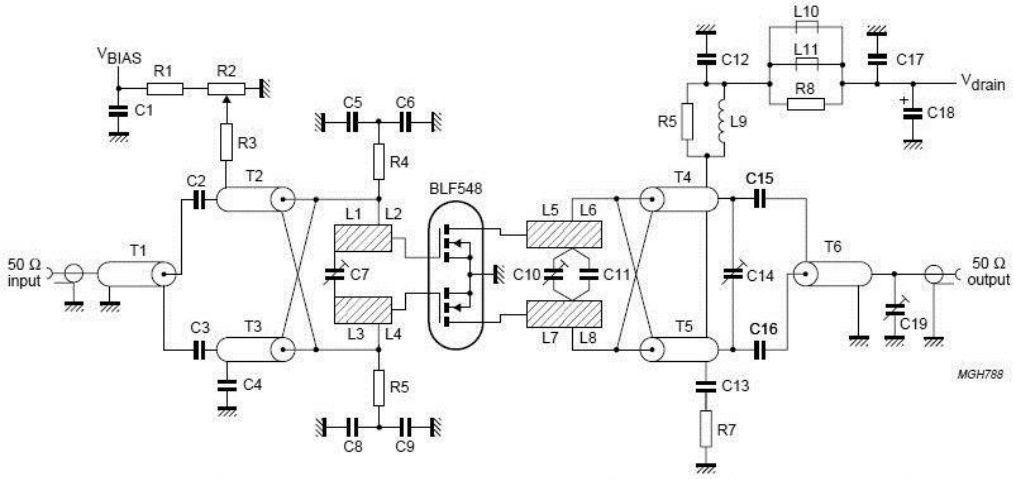


C1	75-380 pF ARCO 465
C2	330 pF clad mica
C3	25-115 pF ARCO 406
C4-C9	1 nF 500 V NPO chip, KD Components 2020N102J501P
C10	.01 µF 1 kV
L1-L2	50 nH, 3t #18 enam. .25" dia.
L3-L4	.68 uH 12t #24 enam .25" dia.
L5-L6	2t #20 on Fair-Rite 264006302 bead
Q1	ARF449A
Q2	ARF449B
R1-R2	470 ohm 1W 5%
T1	Pri: 2t #20 PTFE, Sec: 3/16" Brass tube on: Fair-Rite Products#2843010402 balun core.
T2	4t RG-316 coax on .375" x 1.25" powdered iron form
TL1-TL2	Printed line

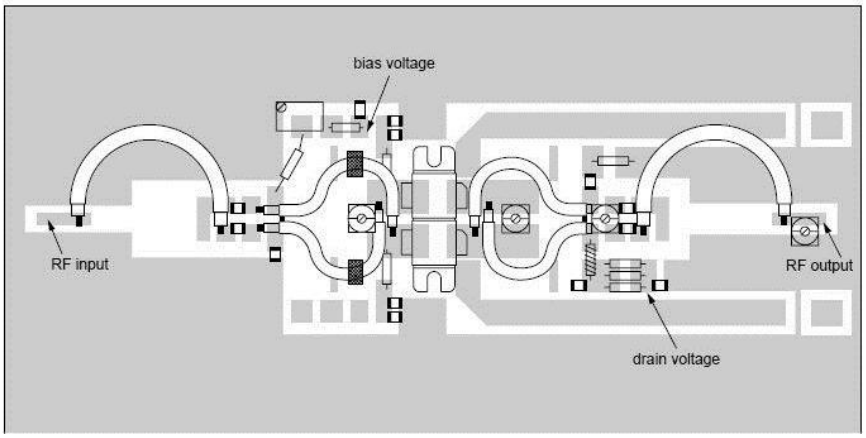
144Mhz 55 Watt FM RF Amplifikatör



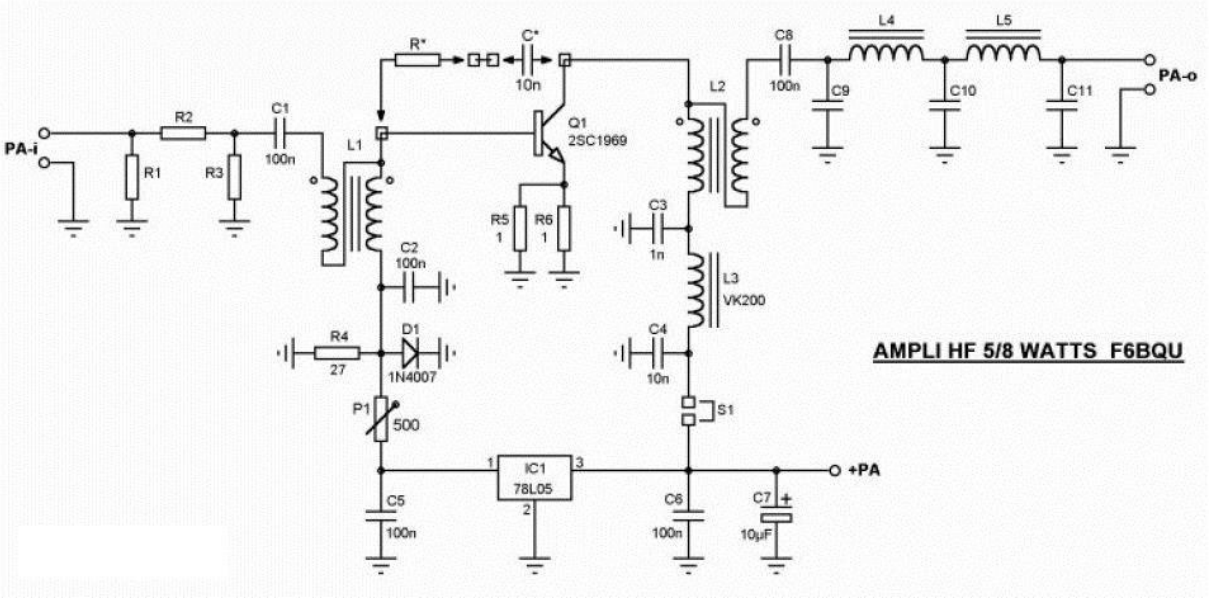
100-450 Mhz 250 Watt FM RF Amplifikatör



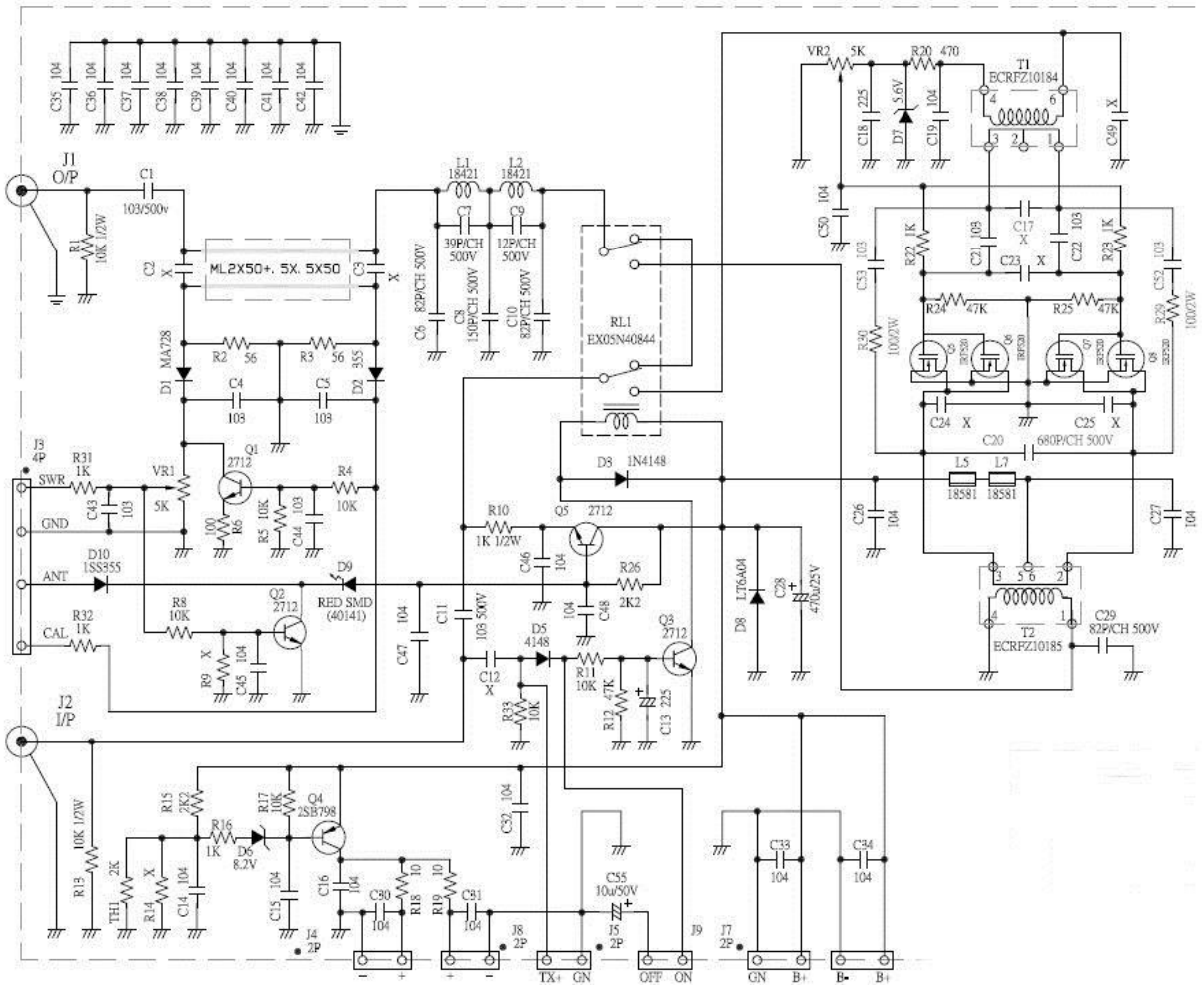
DESIGNATION	DESCRIPTION	VALUE	DIMENSIONS
C1, C17	multilayer ceramic chip capacitor	100 nF	
C2, C3	multilayer ceramic chip capacitor (note 1)	47 pF	
C4, C5, C8	multilayer ceramic chip capacitor (note 1)	820 pF	
C6, C9	multilayer ceramic chip capacitor (note 1)	300 pF	
C7	film dielectric trimmer	2-18 pF	
C10, C14	film dielectric trimmer	2-9 pF	
C11	multilayer ceramic chip capacitor (note 2)	39 pF	
C12	capacitor	22 nF	
C13	capacitor	100 nF	
C15, C16	multilayer ceramic chip capacitor (note 1)	120 pF	
C18	63 V electorlytic capacitor	1 μF	
C19	film dielectric trimmer	1-5 pF	
L1, L3	stripline (note 3)	20 Ω	5 × 8 mm
L2, L4	stripline (note 3)	20 Ω	2.5 × 8 mm
L5, L7	stripline (note 3)	20 Ω	11.5 × 8 mm
L6, L8	stripline (note 3)	20 Ω	4 × 8 mm
L9	5 turns enamelled Cu wire on R6		1.4 mm
L10, L11	grade 3B Ferroxcube wideband RF choke		
T1	semi-rigid coax (note 4)	50 Ω	length 54 mm
T2, T3	semi-rigid coax (note 4)	10 Ω	length 44 mm
T4, T5	semi-rigid coax	25 Ω	length 53 mm
T6	semi-rigid coax	50 Ω	length 74 mm
R1	0.4 W metal film resistor	19.6 kΩ	
R2	10 turn potentiometer	5 kΩ	
R3, R4, R5	0.4 W metal film resistor	2.05 kΩ	
R6, R7, R8	1.0 W metal film resistor	10 Ω	



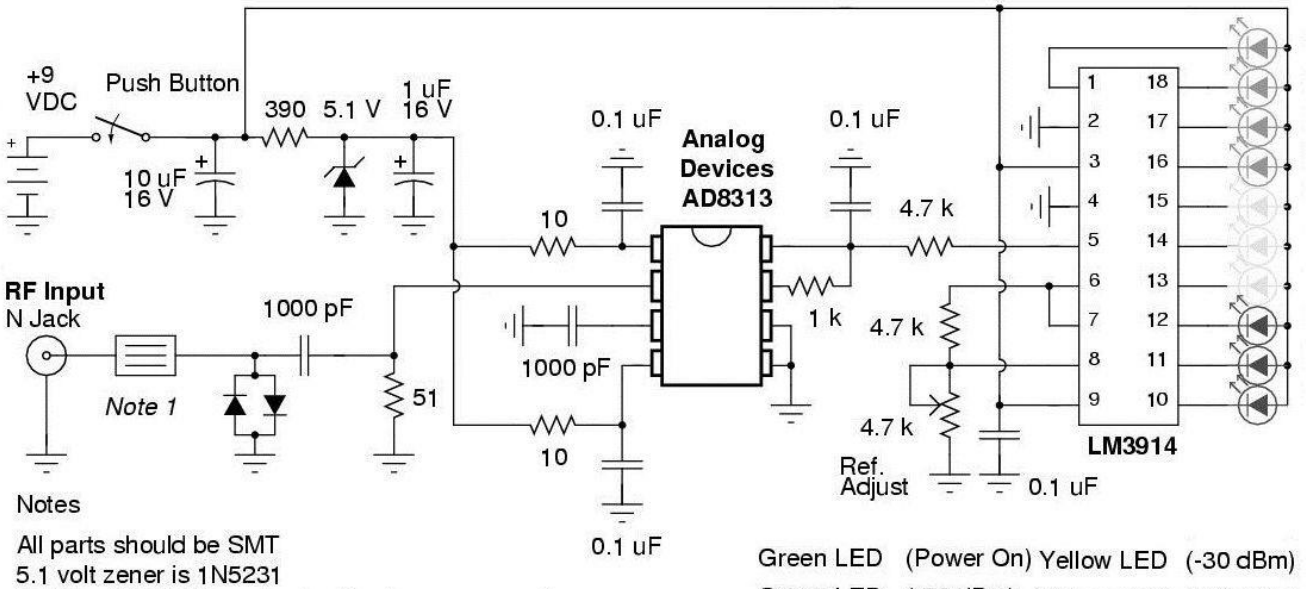
8 Watt RF Amplifikatör



100 Watt RF Amplifikatör



RF Çıkış Güç Ölçer



Notes

All parts should be SMT
5.1 volt zener is 1N5231
Get the AD8313 from Analog Devices, www.analog.com
Refer to AD8313 reference design schematic for more information

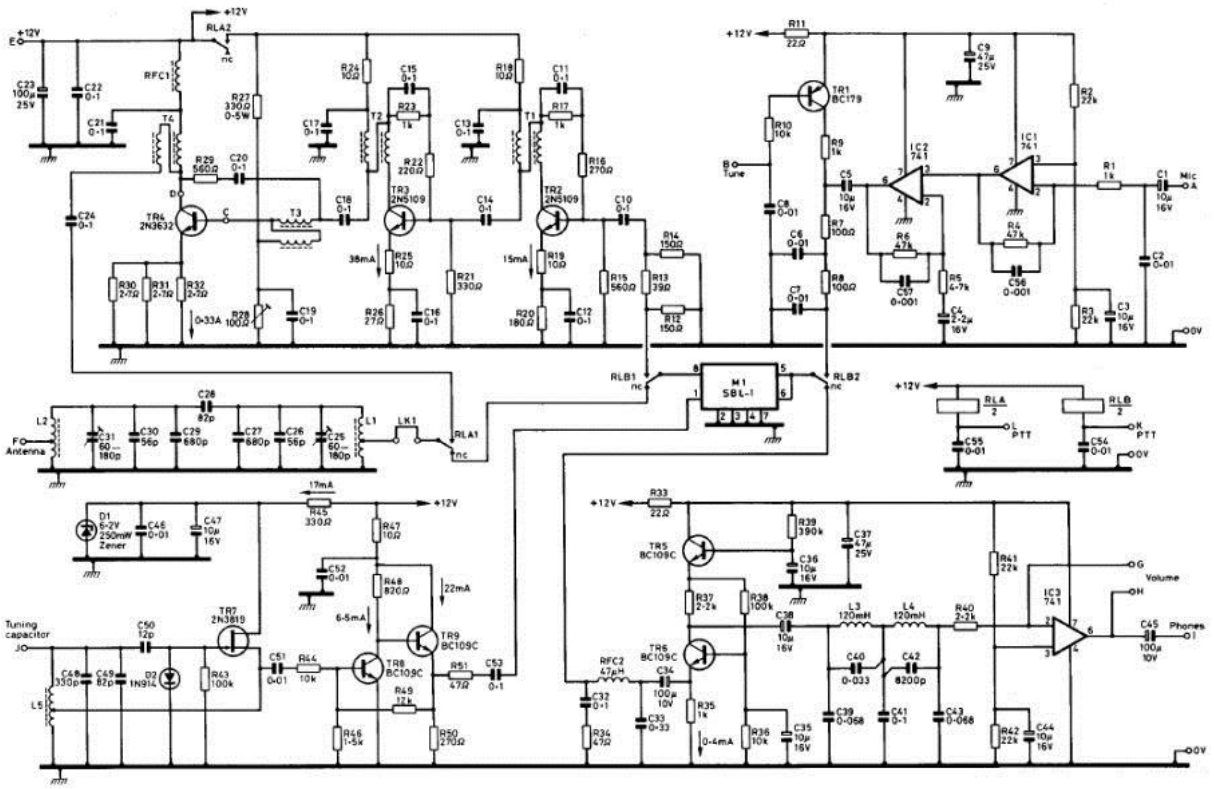
Note 1 Optional bandpass filter for your desired band to measure
Note 2 Optional RF input protection, two 1N5711 diodes

Green LED	(Power On)	Yellow LED	(-30 dBm)
Green LED	(-70 dBm)	Yellow LED	(-20 dBm)
Green LED	(-60 dBm)	Red LED	(-10 dBm)
Green LED	(-50 dBm)	Red LED	(0 dBm)
Yellow LED	(-40 dBm)	Red LED	(+10 dBm)

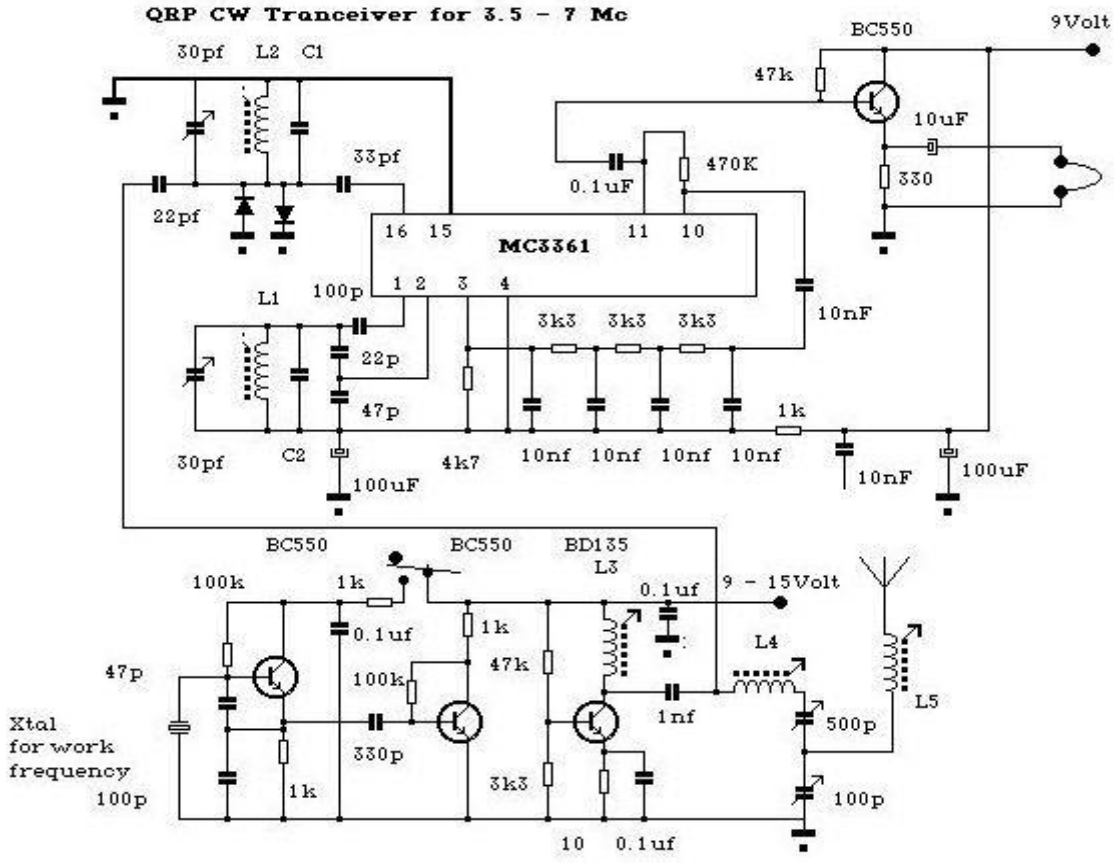
ALICI – VERİCİLER

(TELSİZ – WALKIE TALKIE)

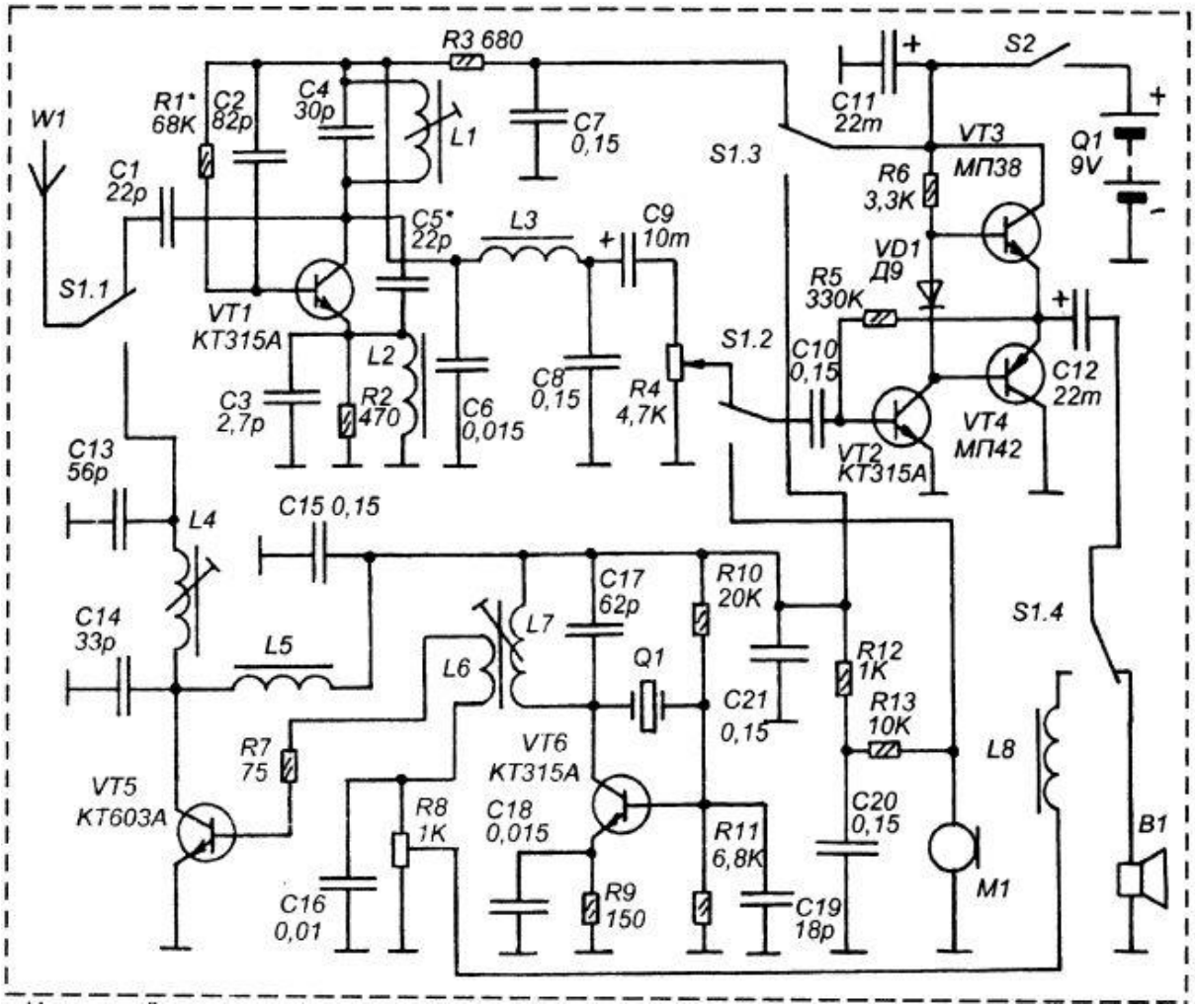
1,8 Mhz QRP Alıcı Verici



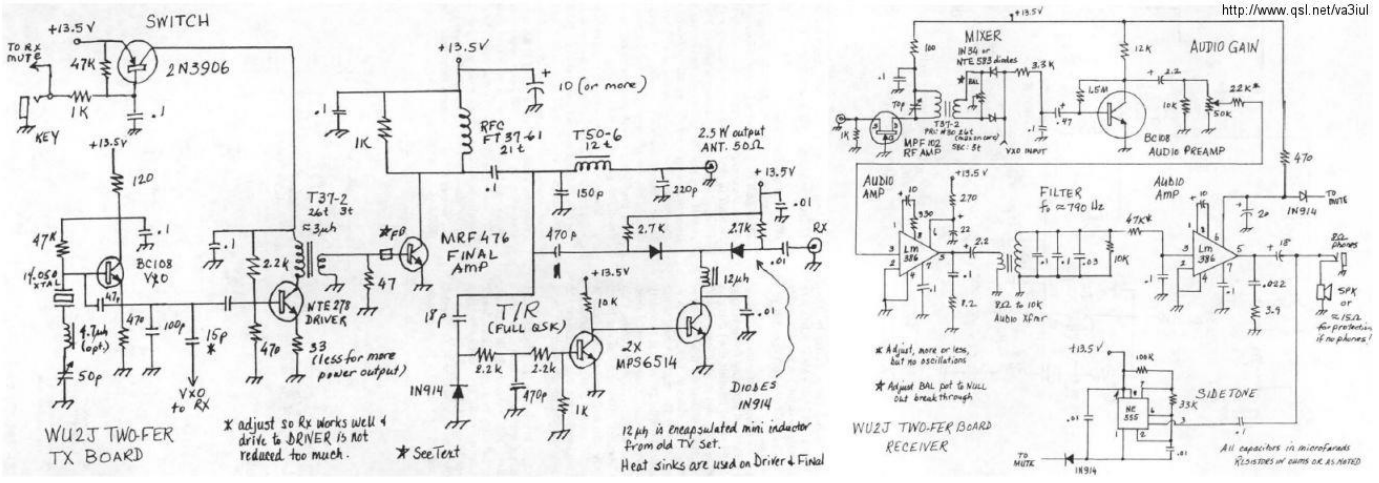
3,5 - 7 Mhz QRP CW Alıcı Verici



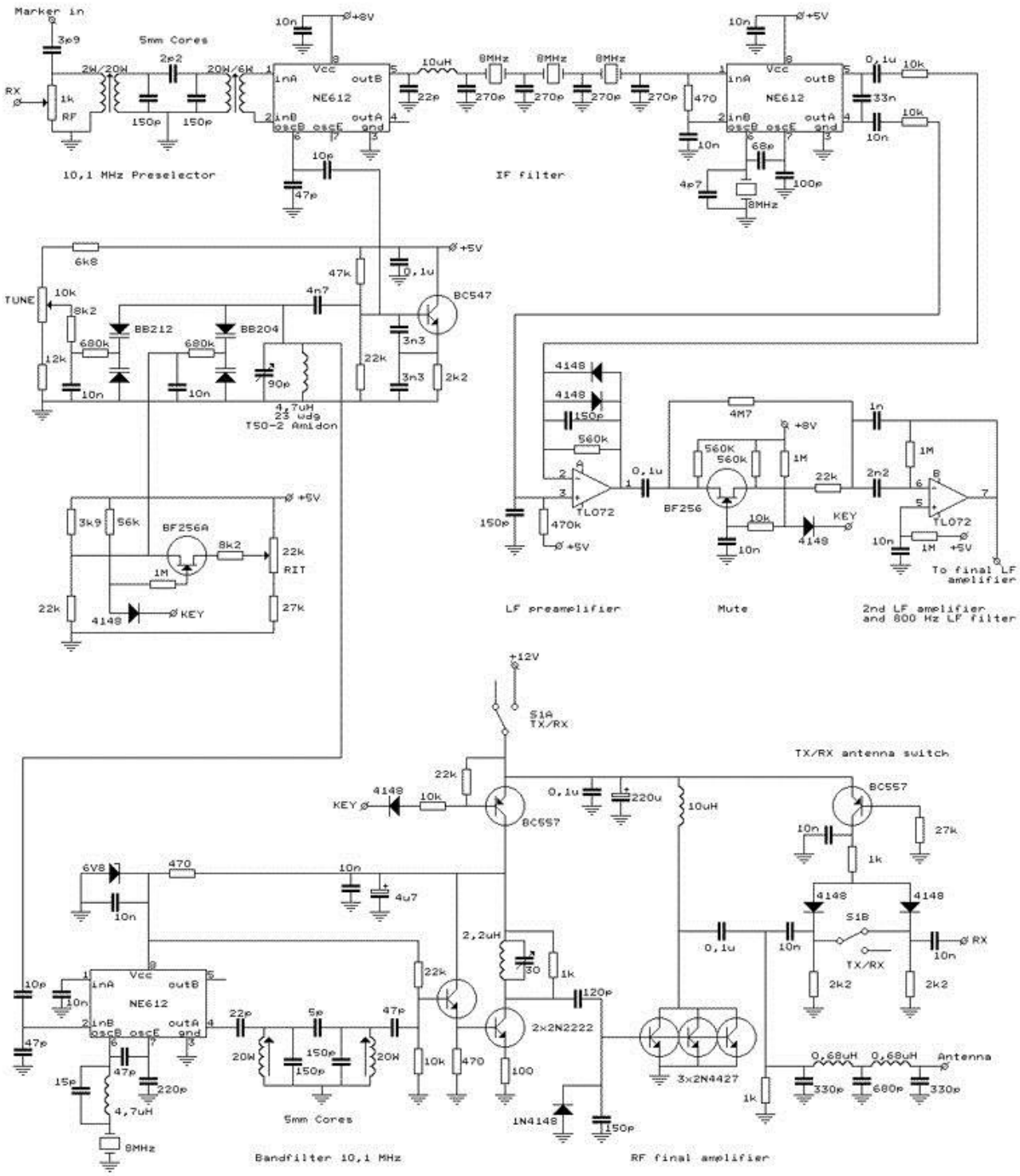
10 Mhz AM Alıcı Verici



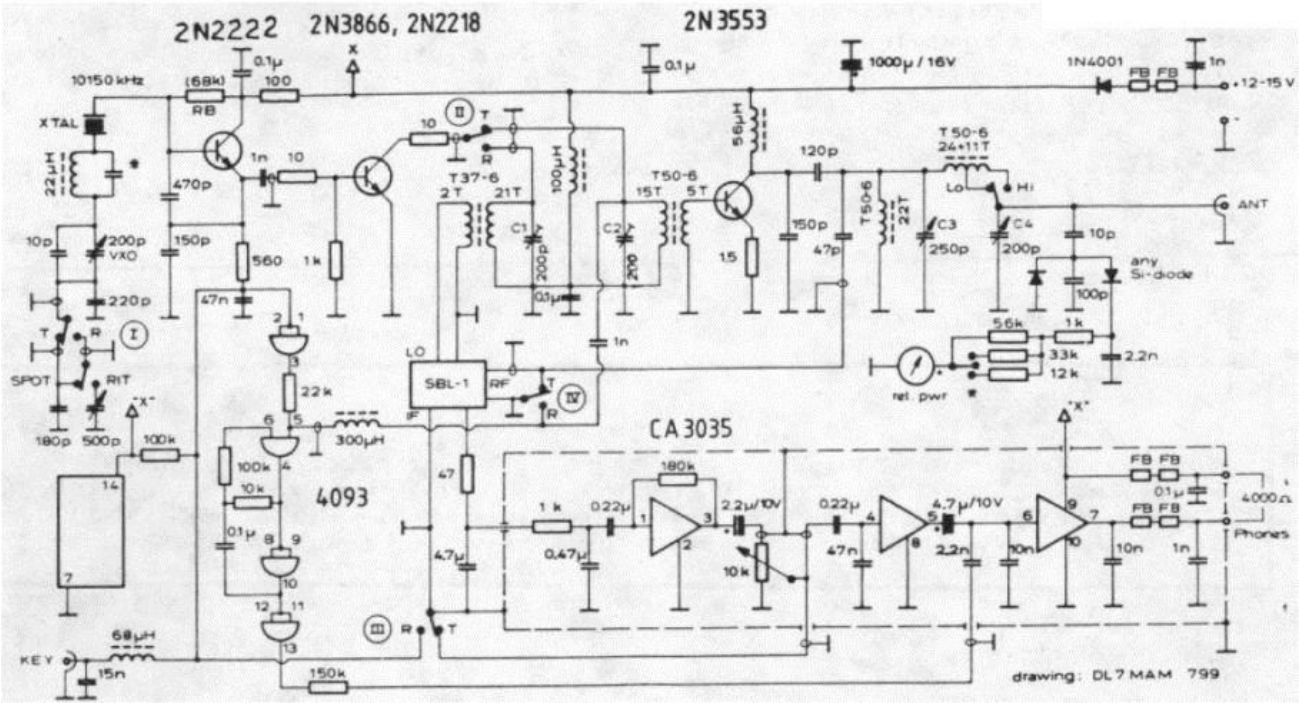
15 Mhz Alıcı Verici



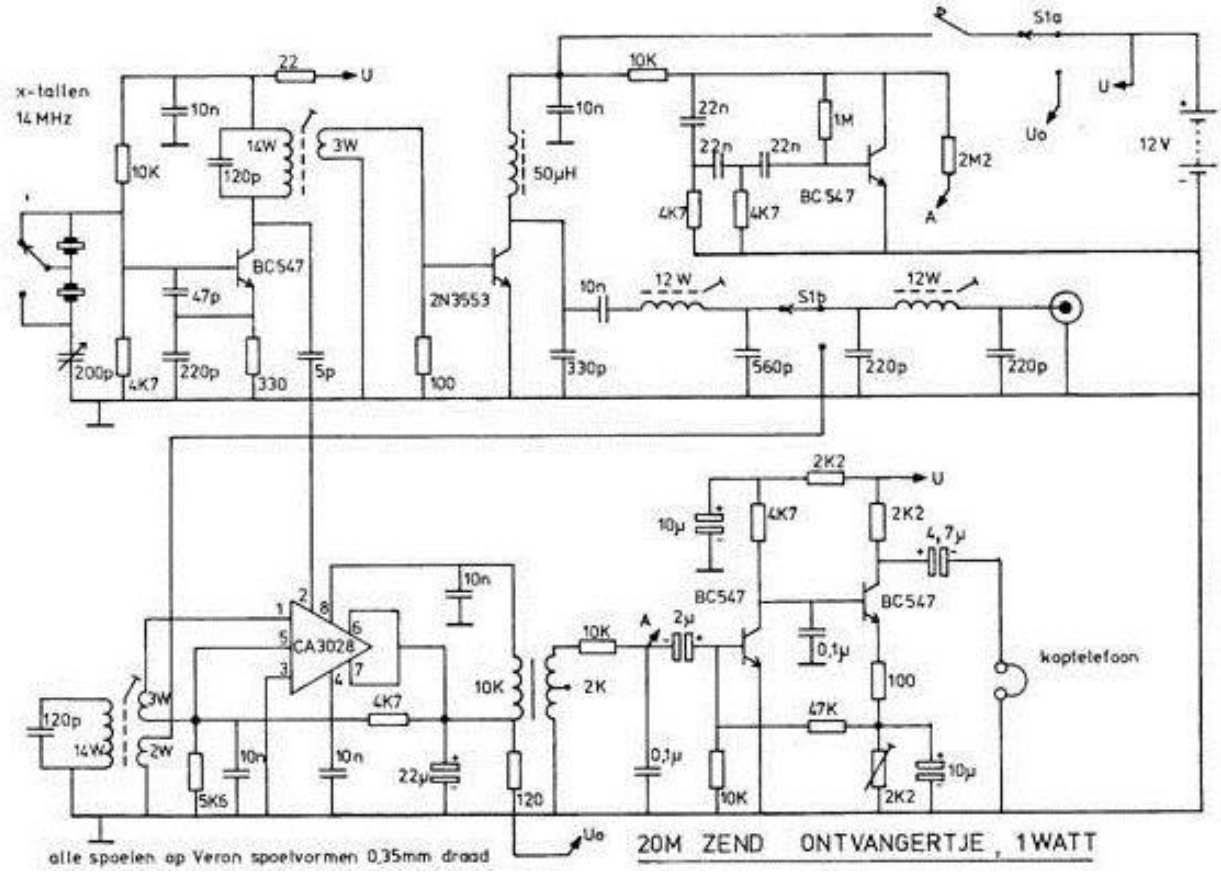
10 Mhz AM 1 Watt Alıcı Verici



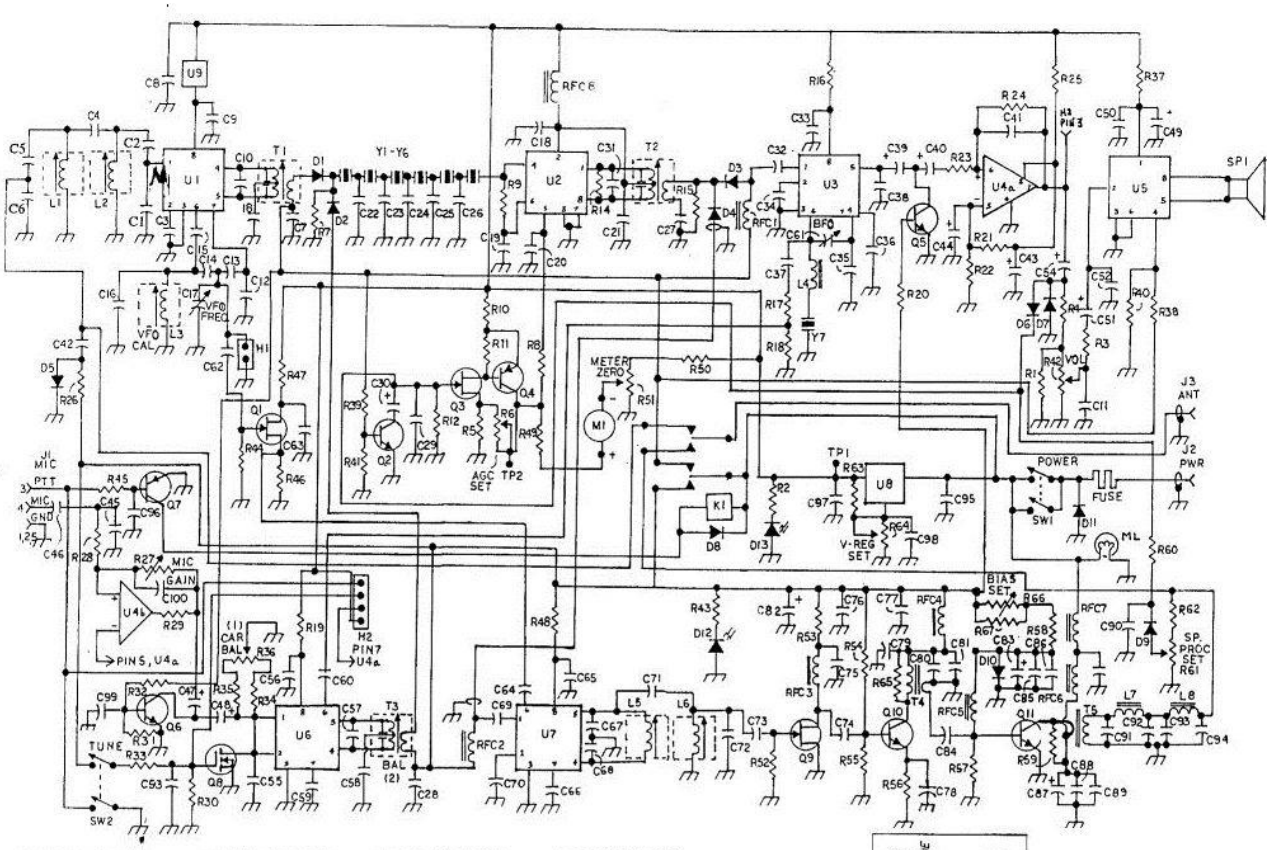
10 Mhz AM 2 Watt Alıcı Verici



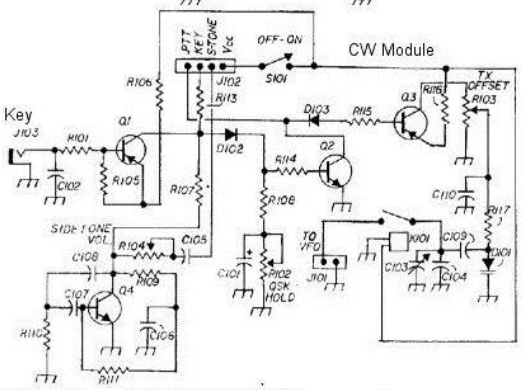
15 Mhz QRP Alıcı Verici



15 Mhz SSB CW 5 Watt Alıcı Verici

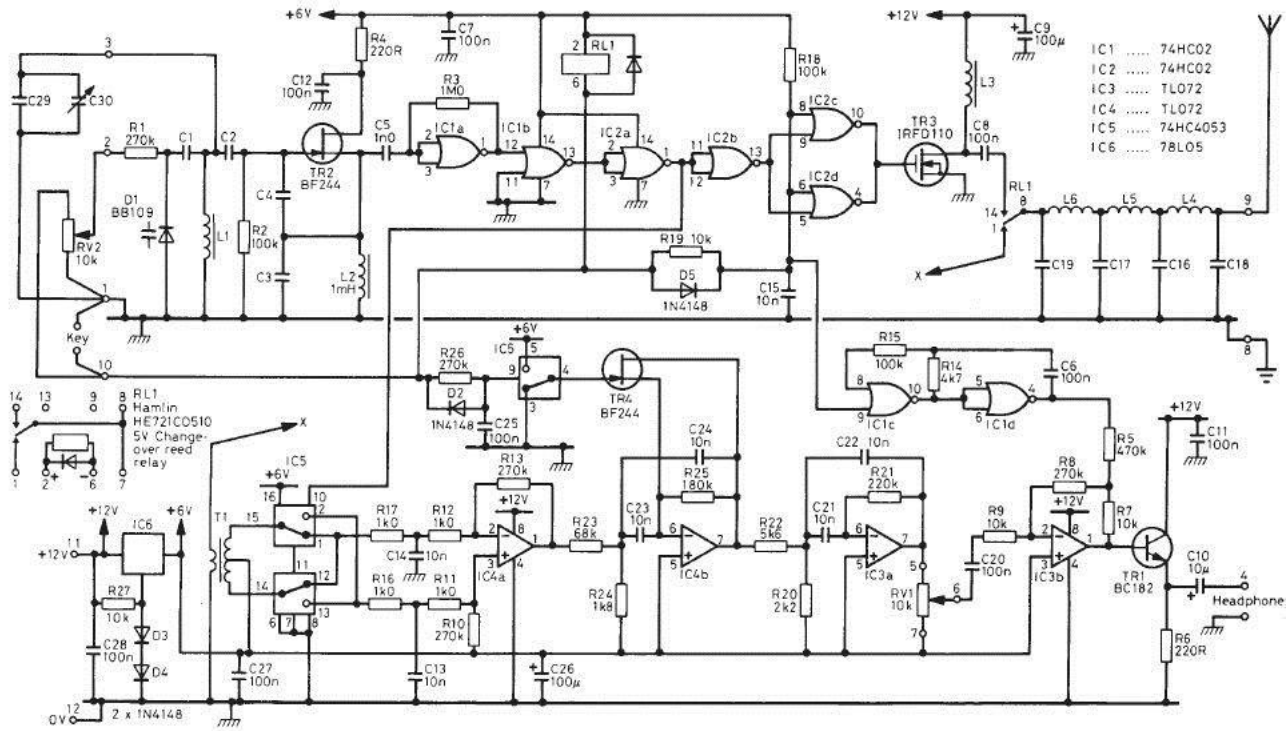


DESIGNATION	DESCRIPTION	DESIGNATION	DESCRPTION
C1,5,73	100pF, 50V Multilayer	Q8	VN10KM
C2	560pF, 50V Multilayer	Q9	J310
C3,7,11,18,19,20,21,27	.01uF, 25/50V Disc	Q10	2N5109
C28,29,34,36,38,42,45,52	.01uF, 25/50V Disc	Q11	MRF-477
C53,55,58,59,63,65,66,70	.01uF, 25/50V Disc	R1,2,7,15,16,19,26,43	2.2K ohm, 1/4 Watt
C75,76,79,85,88,90,96	.01uF, 25/50V Disc	R3,54	4.7K ohm, 1/4 Watt
C4,71	4.7pF, 500V Disc	R4,8,11,14,20,39,41,45	10K ohm, 1/4 Watt
C6	680pF, 50V Multilayer	R62	10K ohm, 1/4 Watt
C8,9,33,46,50,56,77,78	.1uF, 50/100 Disc	R5,23,28,46	1K ohm, 1/4 Watt
C81,86,89,95,97,98,99	.1uF, 50/100 Disc	R6,36,61,64	1K ohm, Trimpot
C10,31,57	220pF, 50V Disc	R9,25	330 ohm, 1/4 Watt
C12,13,14	560pF, 160V Polysterene	R10,13,29,47,63	100 ohm, 1/4 Watt
C15,84	.1uF, 50V Multilayer	R12	680K ohm, 1/4 Watt
C16	27pF, 50V Multilayer	R17,24,30,44,52,60	100K ohm, 1/4 Watt
C17	5-50pF, 750V Air Var	R18,50	1.5K ohm, 1/4 Watt
C22,26	120pF, 50V Multilayer	R21,22,32,33,34,35,38	47K ohm, 1/4 Watt
C23,24,25	150pF, 50V Multilayer	R27	50K ohm, 1/4 Watt
C30	2.2uF, 16V Electrolytic	R37,53,57	22 ohm, 1/4 Watt
C32,41,60,74,80,100	470pF, 50V Multilayer	R40	22K ohm, 1/4 Watt
C35	47pF, 50V Multilayer	R42	10K ohm, Pot
C37,62	22pF, 50V Multilayer	R48	3.3K ohm, 1/4 Watt
C39,40,47,48,51,54	1uF, 50V Electrolytic	R49	5.6K ohm, 1/4 Watt
C43,44	47uF, 35V Electrolytic	R51	10K ohm, Trimpot
C49,83,87	100uF, 16V Electrolytic	R55	390 ohm, 1/4 Watt
C61	12-100pF, 250V Trimmer	R56	10 ohm, 1/4 Watt
C64,69	100pF, 50V Disc	R58	180 ohm, 1/2 Watt
C67,68	180pF, 50V Multilayer	R59	150 ohm, 1/4 Watt
C72	68pF, 50V Multilayer	R60	100K ohm, 1/4 Wat
C82	10uF, 35V Electrolytic	R65,67	220 ohm, 1/4 Watt
C91,92,93,94	220pF, 500V Sm	R66	500 ohm, Trimpot
D1,2,3,4,5,6,7,8,9	1N4148	RFC1,2,3,4	10uH, Inductor
D10,11	1N4001	RFC5	22uH, Inductor
D12	MV5753 Red LED	RFC6	4.7uH, Inductor
D13	Green LED	RFC7	4T, Indutor
H1	2 Position Header	RFC8	100uH, Inductor
H2	4 Position Header	SW1,2	Switch
J1	5 Pin Din Connector	T1,2,3	25K:1K Inductor
J2	2.1MM Coaxial Jack	T4	3:1 Transformer
K1	12V Relay	T5	4:1Transformer
L1,2,5,6	1.8uH, Red Inductor	U1,3,6,7	NE602
L3	6.5uH Inductor	U2	MC1350P
L4	15uH, Inductor	U4	LM358
L7,8	12T Inductor	U5	TDA7052AN
Q1,3	2N5486	U8	LM317T
Q2,5,6	2N3904	U9	78L05AC
Q4,7	2N3906	Y1,2,3,4,5,6,7	10MHz Crystals



Designator	Part Number	Description
C101	203-0013	Capacitor, Electrolytic, Radial, 16v, 22 uF
C102	200-0004	Capacitor, Disc Ceramic, 25/50v, 20%, .01 uF
C103	204-0001	Capacitor, Trimmer, 250v, 3-10 pF
C104	205-0039	Capacitor, Multilayer Cer., .1, 5%, 50v, NPO, 39 pF
C105	200-0005	Capacitor, Disc Ceramic, 50/100v, 20%, .1 uF
C107,C108,C106	205-1133	Capacitor, Multilayer, .1, 50v, 10%, Z5u, .033 uF
C109	200-2004	Capacitor, Disc Ceramic, 1 Kv, 5%, NPO, 4.7 pF
C110	200-2024	Capacitor, Disc Ceramic, 1 Kv, 20%, .001 uF
D101	315-2104	Transistor, Varactor, MV 2104
D102,D103	300-0003	Diode, Switching, DO-35, 10 mw, 75 Piv, 1N4148
J101	612-3002	Connector, Socket, .1, PCB, Bottom Entry, 2 Pos
J102	612-3004	Connector, Socket, .1, PCB, Bottom Entry, 4 Pos
J103	601-5005	Jack, 3.5mm, PCB, Stereo, Closed
K101	408-1011	Relay, Reed, PCB, 1050 Ohm, 12 vDC, SPST
Q1,Q3	305-0002	Transistor, General Purpose, TO-92, PNP, 2N3906
Q2,Q4	305-0001	Transistor, General Purpose, TO-92, NPN, 2N3904
R101,R113	100-4470	Resistor, 1/4 Watt, 5%, Film, 47.0 K
R102	133-5100	Resistor, Trimpot, Sub. Horz., 100 K
R104,R103	132-4100	Resistor, Trimpot, Sub. Vert, 10 K
R105,R117	100-5100	Resistor, 1/4 Watt, 5%, Film, 100 K
R106,R116	100-2100	Resistor, 1/4 Watt, 5%, Film, 100 Ohm
R107	100-3330	Resistor, 1/4 Watt, 5%, Film, 3.3 K
R110,R108	100-3100	Resistor, 1/4 Watt, 5%, Film, 1.0 K
R111,R109	100-4180	Resistor, 1/4 Watt, 5%, Film, 18.0 K
R114	100-4100	Resistor, 1/4 Watt, 5%, Film, 10.0 K
R115	100-3220	Resistor, 1/4 Watt, 5%, Film, 2.2 K

15 Mhz Alıcı Verici



CAPACITORS

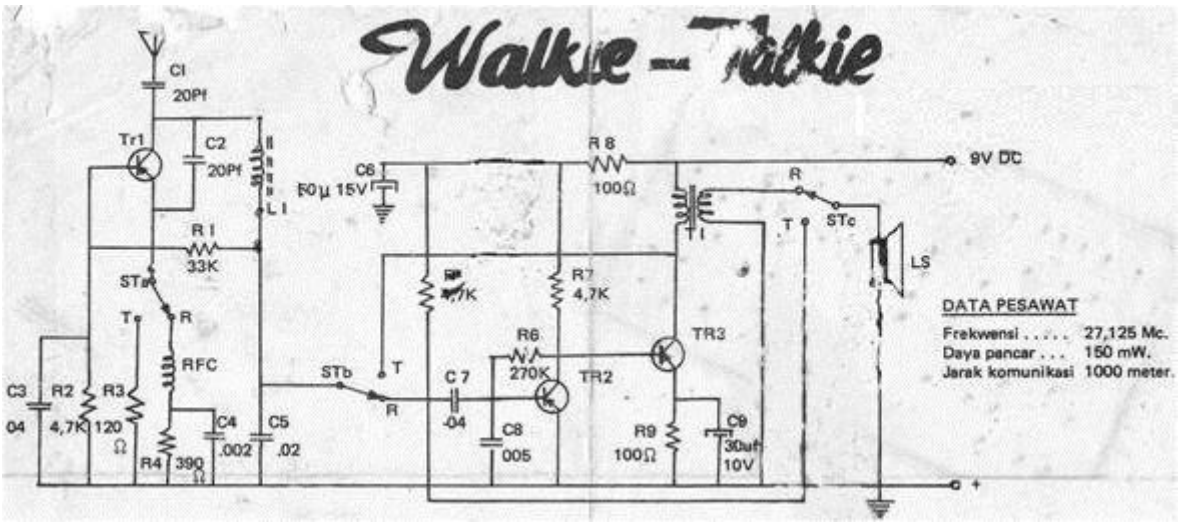
Ref	Type	Pitch	Value (80m)	Value (160m)
C1	Ceramic plate 9	2.54	4p7	15p
C2	Polystyrene	-	47p	100p
C3, 4	Polystyrene	-	220p	470p
C5	Ceramic monolithic	2.54	1n	1n
C6, 7, 8, 11, 12, 20, 25, 27, 28	Ceramic monolithic	2.54	100n	100n
C9, 26	Aluminium radial 16V	2.5	100	100µ
C10	Aluminium radial 16V	2.0	10µ	10µ
C13, 14, 15, 21, 22, 23, 24	Ceramic monolithic	2.54	10n 10%	10n 10%
C16, 17	Polystyrene	-	1n5	2n7
C18, 19	Polystyrene	-	470p	1n
C29*	Polystyrene	-	470p	820p
C30*	Air-spaced VFO	-	25p	75p

**Select on test component*

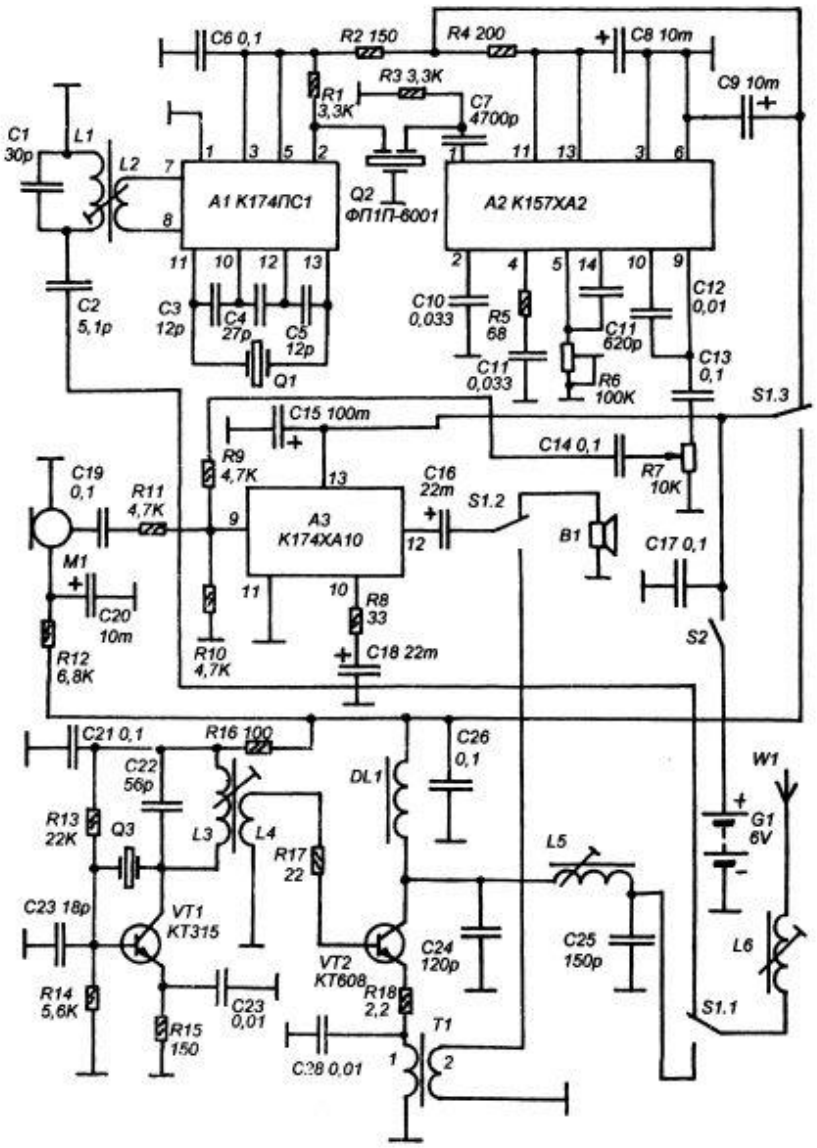
INDUCTORS

Ref	Type	80m	160m
L1	T37-2 (Amidon)	31t 27SWG (0.4mm)	41t 30SWG (0.315mm)
L2	7BS (Toko)	1mH	1mH
L3	T37-2	2.2µH 23t 27SWG	4.5µH 33t 30SWG
L4, 6	T37-2	2.9µH 26t 27SWG	5.45µH 36t 30SWG
L5	T37-2	4.0µH 31t 27SWG	6.9µH 41t 30SWG
T1	Balun	2t primary, 5+5t secondary, 0.2mm 36SWG (28-43002402)	

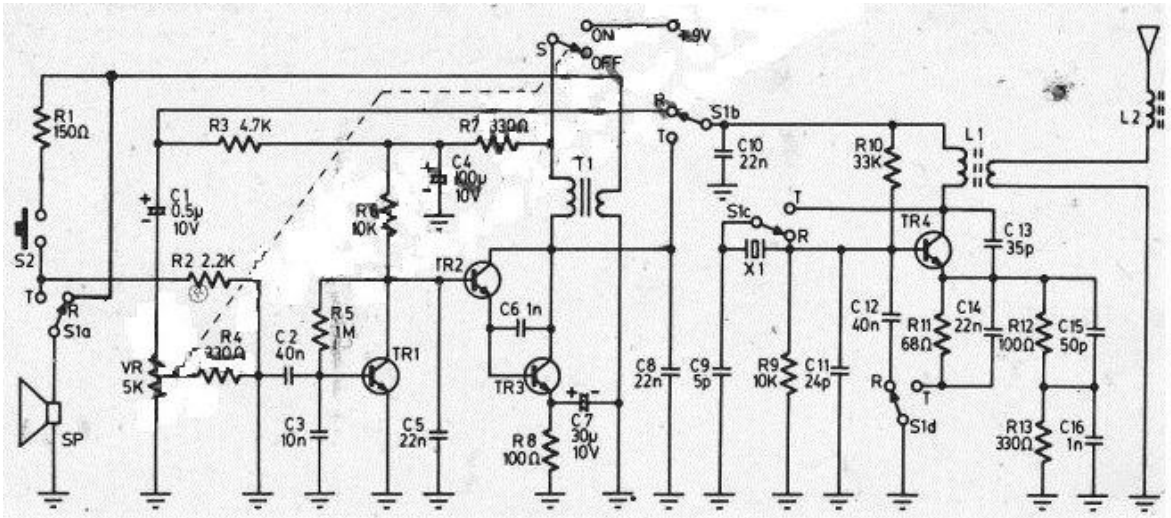
27 Mhz AM Walkie Talkie



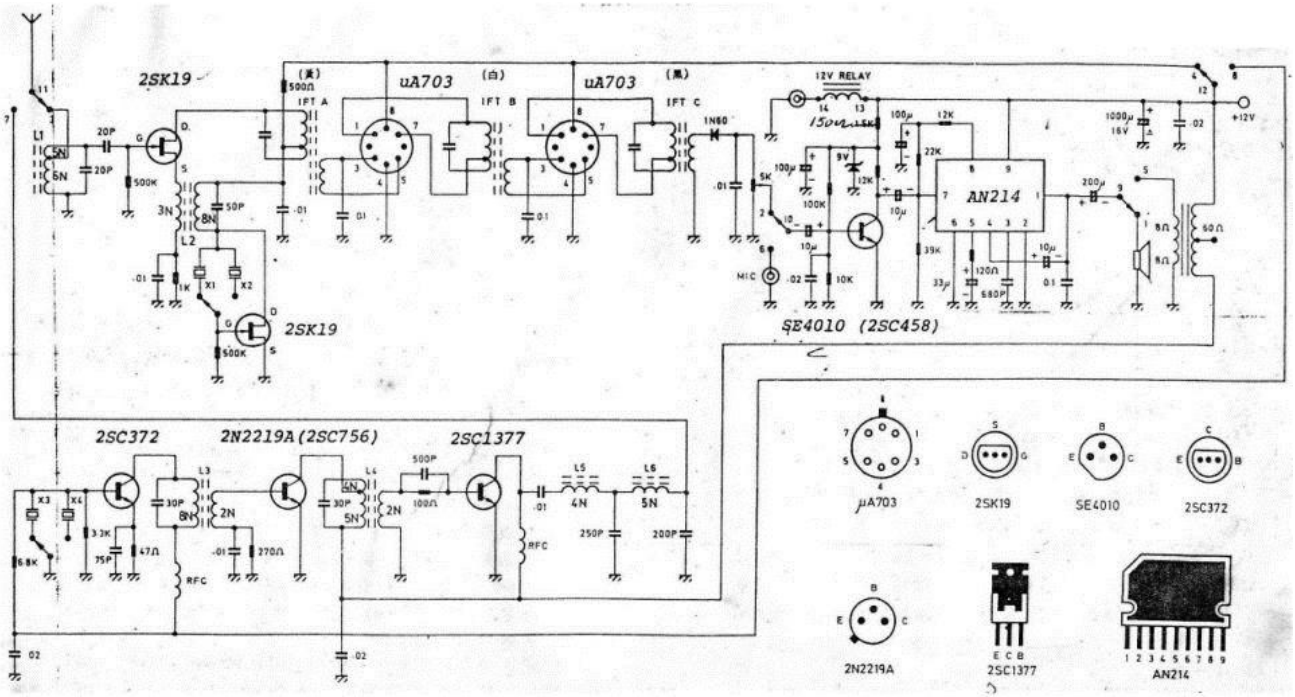
27 Mhz AM Alıcı Verici



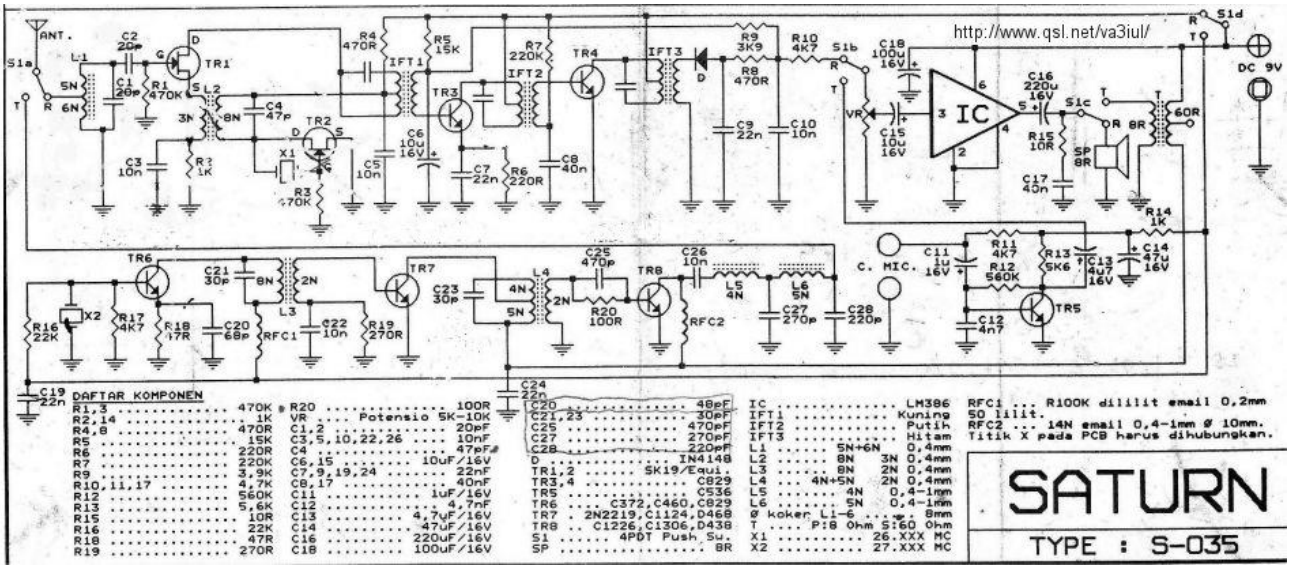
27 Mhz AM Walkie Talkie



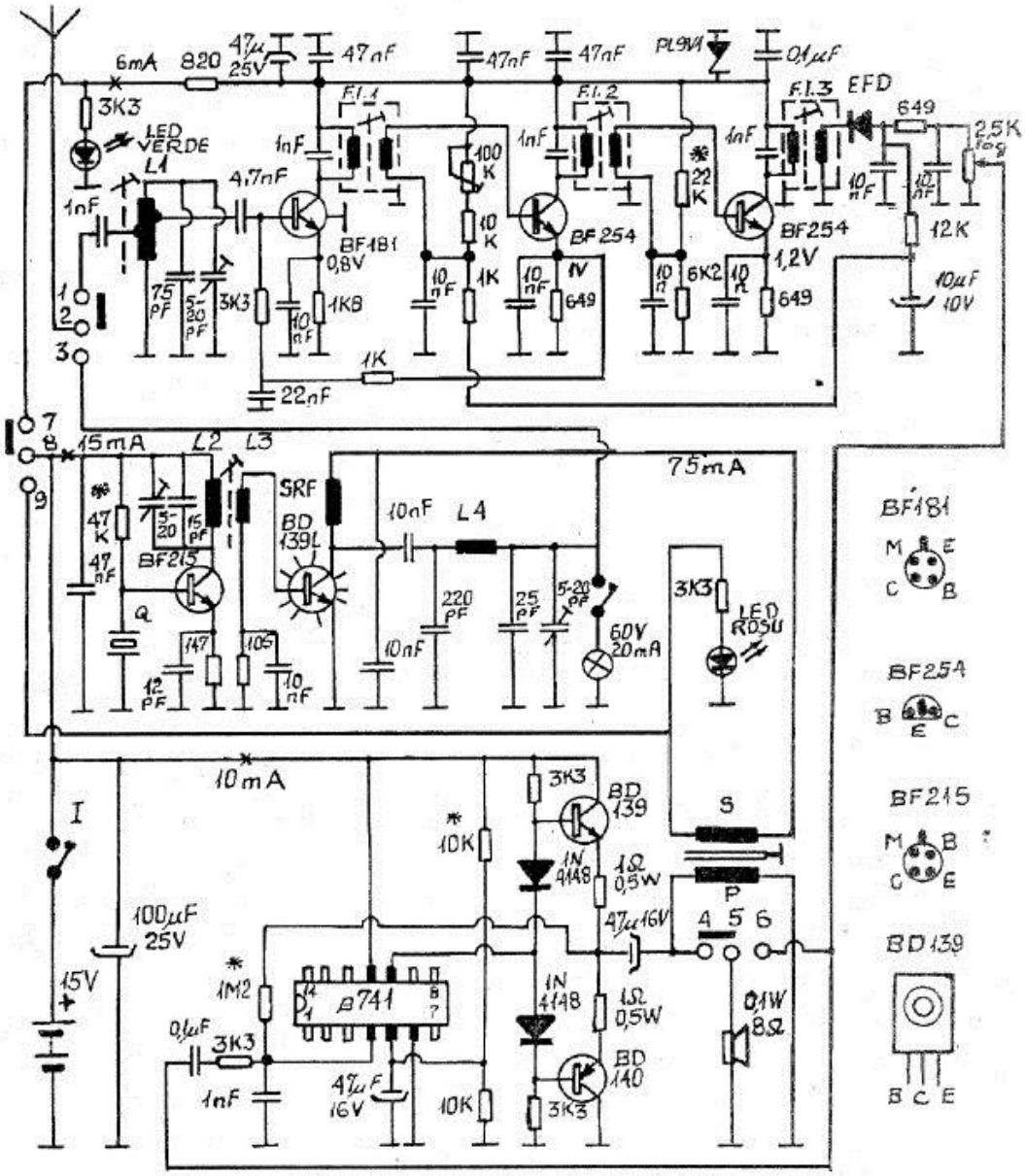
27 Mhz AM 6 Watt Alıcı Verici



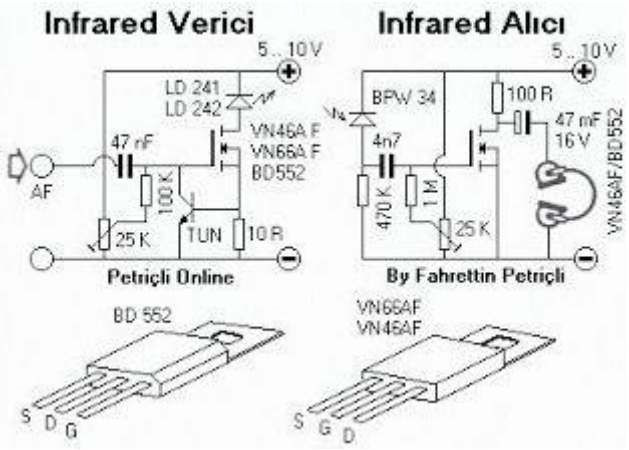
27 Mhz AM Walkie Talkie



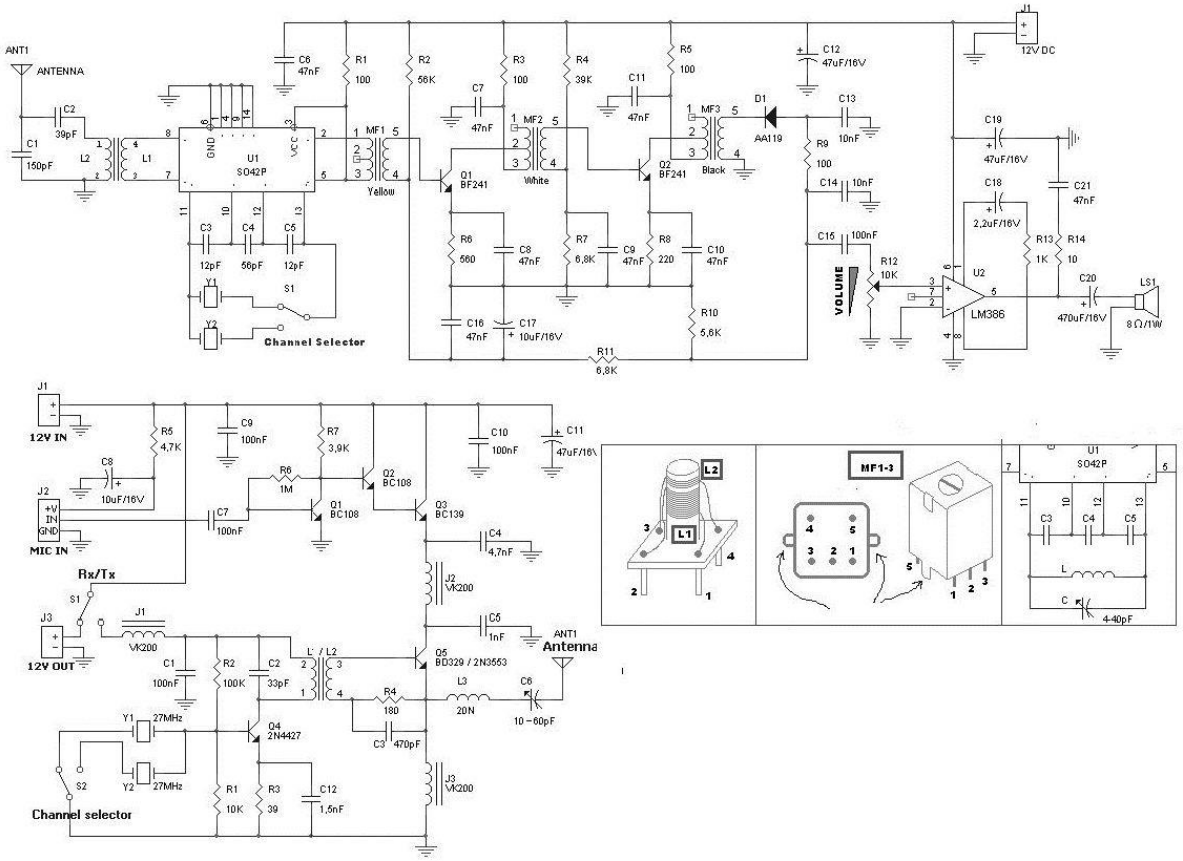
27 Mhz AM Walkie Talkie



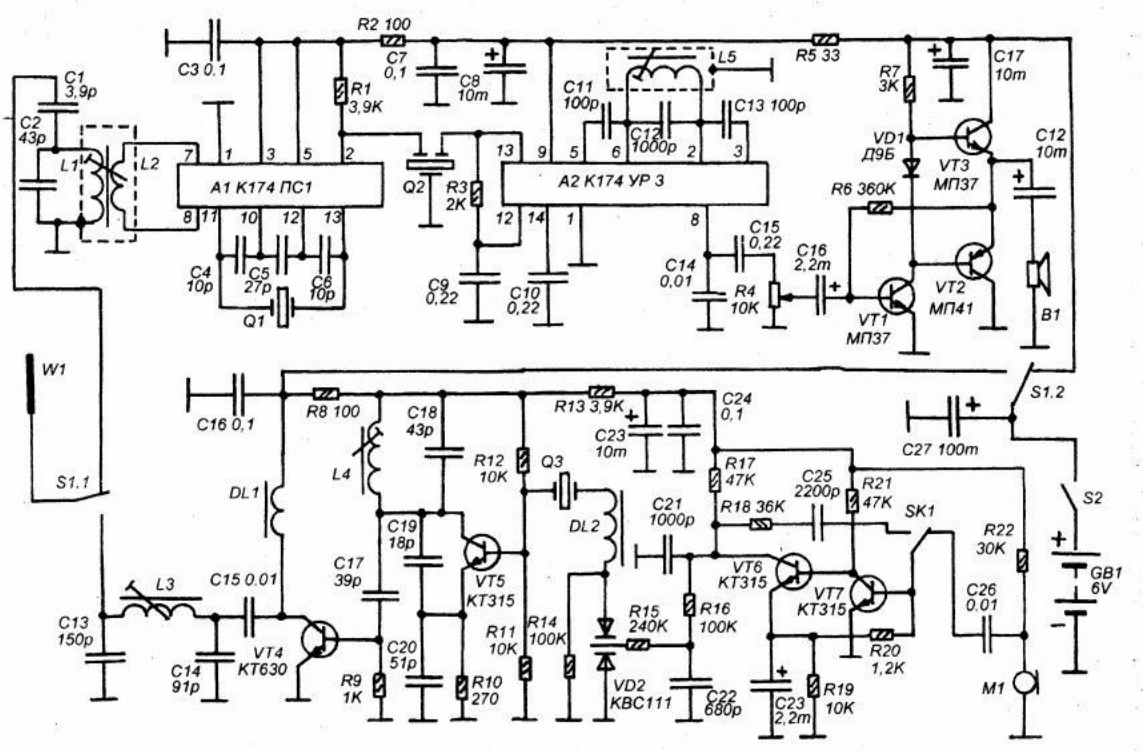
IR Alıcı Verici



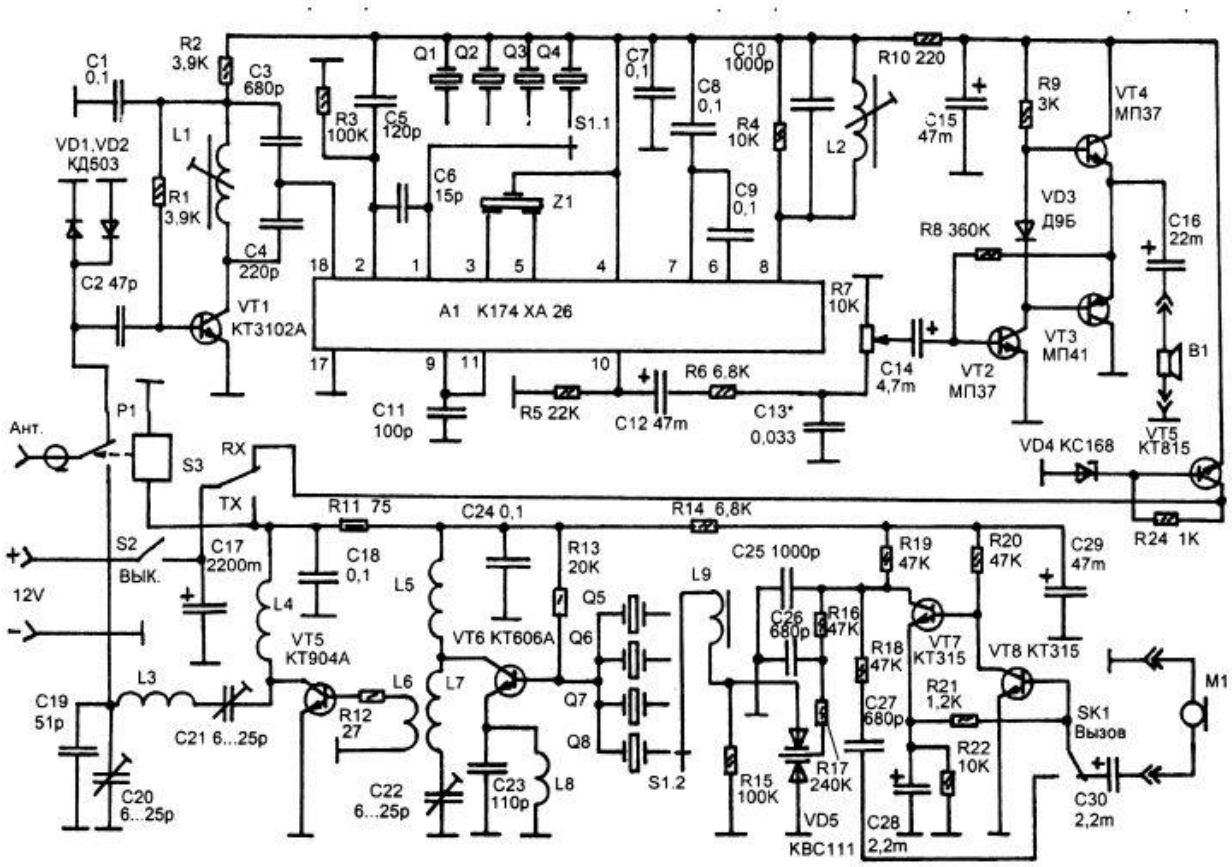
27 Mhz AM Walkie Talkie



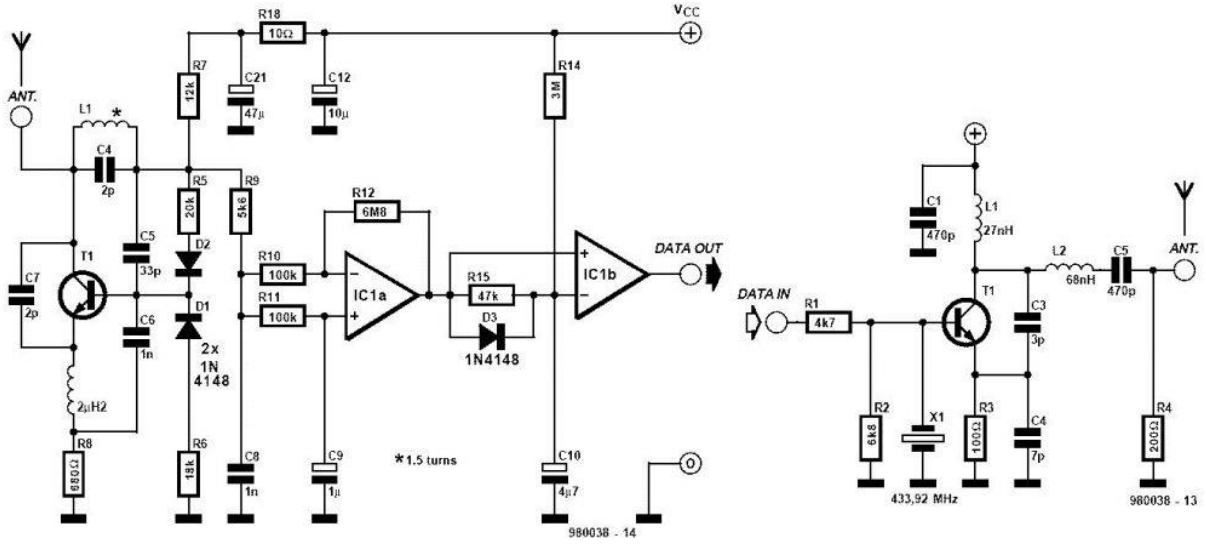
88-108 FM Alıcı Verici



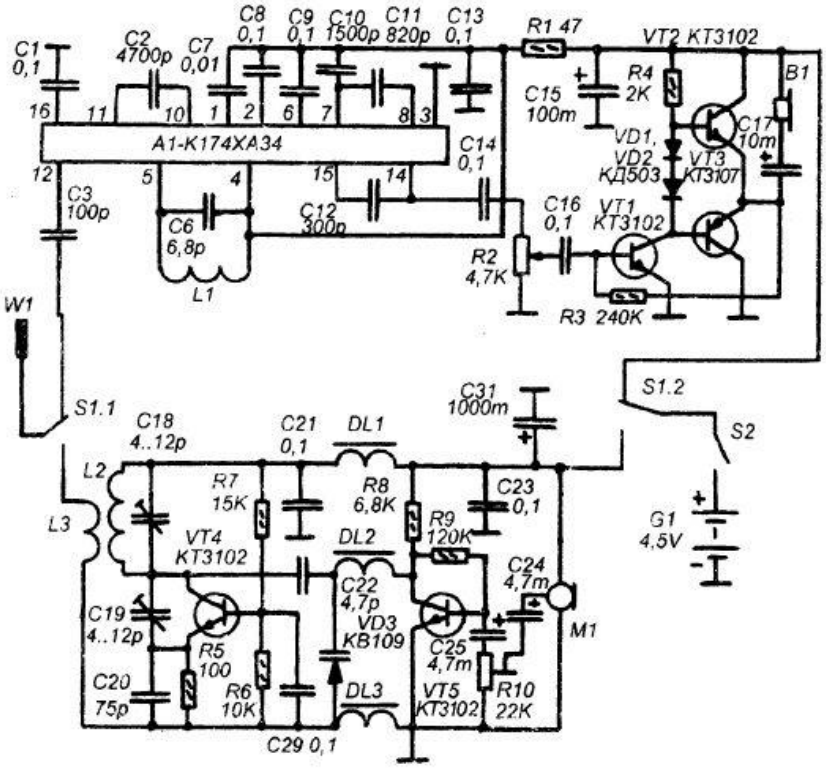
88-108 FM Alıcı Verici



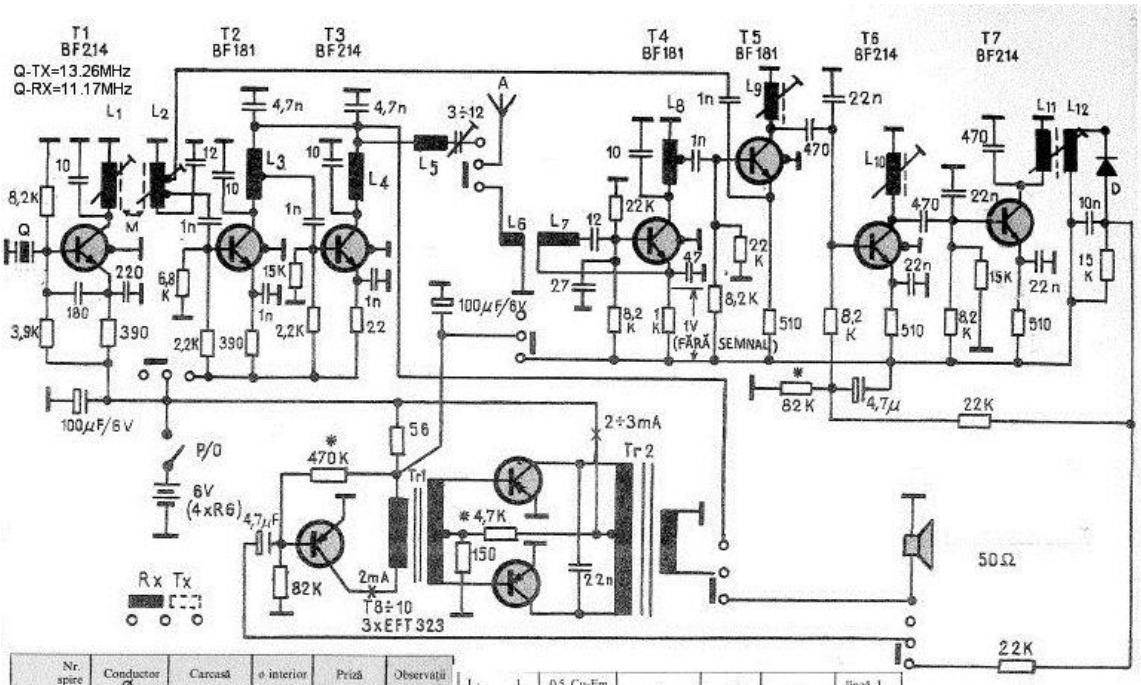
AM Kısa Dalga Alıcı Verici



88-108 FM Alıcı Verici

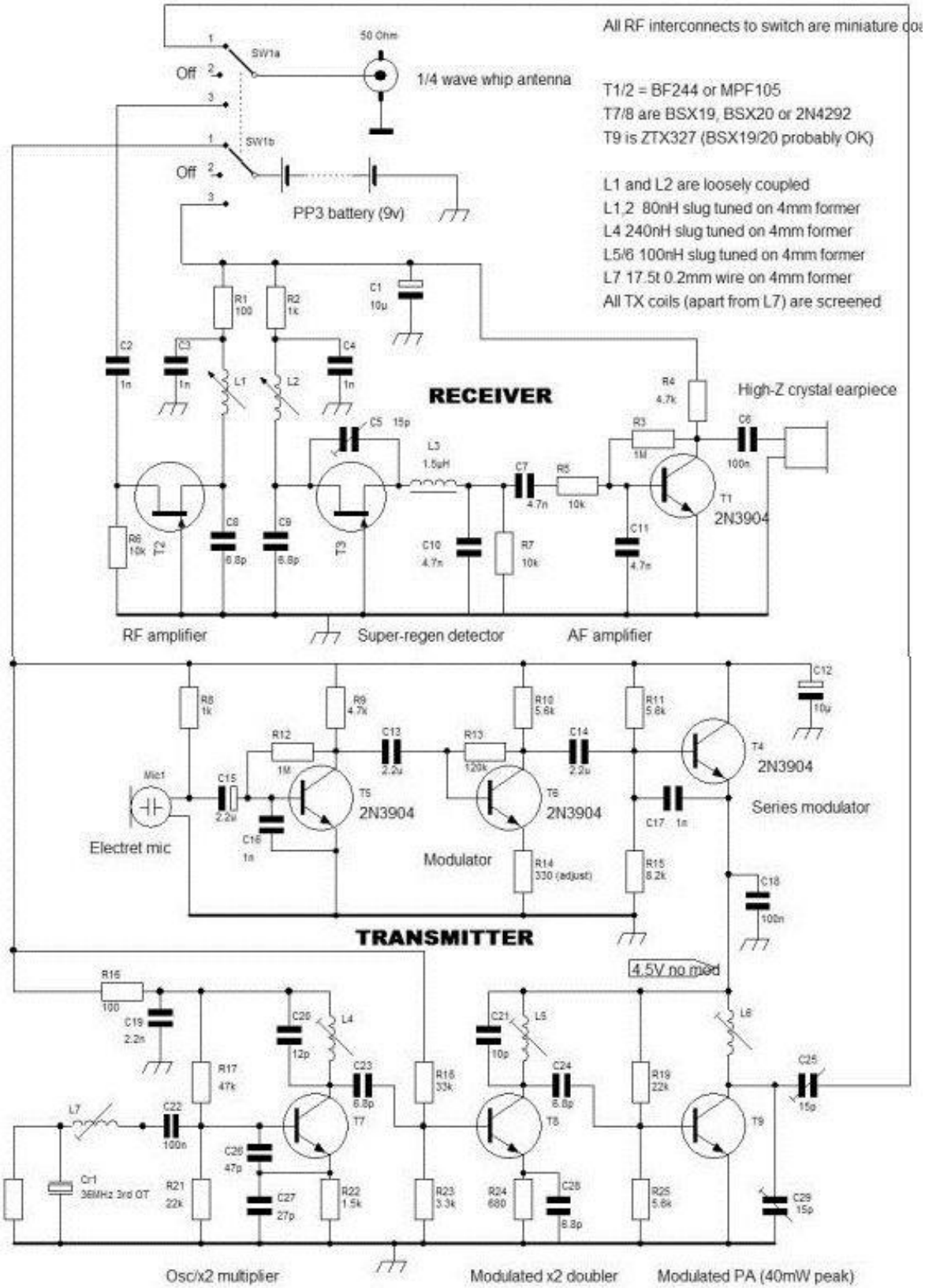


144 Mhz AM Walkie Talkie



	Nr. spire	Conductor Ø	Carcasă	ø interior	Priză	Observații
L_1	3,75	1 Cu-Ag	din blocul UUS-Mamaia	—	—	—
L_2	4,25	1 Cu-Ag	idem	—	la spira 0,5 și la 1	—
L_3	7	0,5 Cu-Ag	aer	5	la spira 1,5	—
L_4	7	„	„	„	la spira 2	—
L_5	8	„	„	„	—	—
L_6	1	0,5 Cu-Em	„	„	—	lîngă L_7
L_7	7	0,5 Cu-Ag	„	„	—	—
L_8	7	„	„	„	la spira 1,5	perpendicular pe L_7
L_9, L_{10}	70	0,1 Cu-Em	FI-Albatros	—	—	—
L_{11}	70	„	„	—	—	—
L_{12}	50	„	„	—	—	peste L_{11}

150 Mhz AM Alıcı Verici



150 Mhz FM Alıcı Verici (PLL)